February

QUARTO

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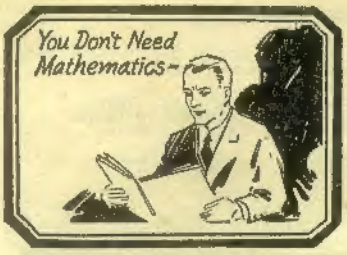
AMAZING STORIES

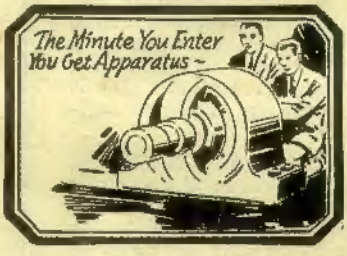
HUGO GERNSBACK
EDITOR

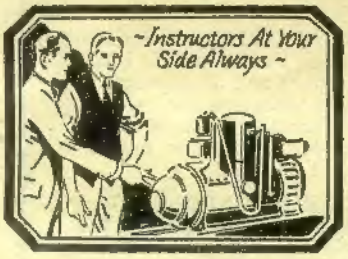
Stories by
H. G. Wells
Jules Verne
Hugo Gernsback

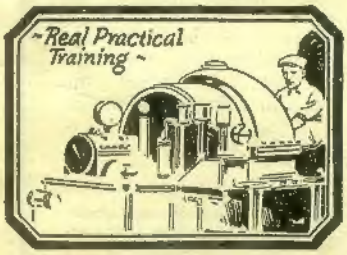
EXPERIMENTER PUBLISHING COMPANY, INC. NEW YORK, PUBLISHERS OF

The Untrained Man









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COYNE
ELECTRICAL SCHOOL

Not a Correspondence School
H. C. LEWIS, President, Dept. 28-02 – Established 1899
500 South Paulina Street, Chicago

Now I've worked on a farm (didn't do me no harm
But I never could save up a dime),
I slaved like a horse just using brute force,
For pleasures I never had time;
It was early to bed (when the stock was all fed)
Then you'd get up at cold of the dawn,
Not once did I shirk in the rounds of my work
But one day my pep was all gone.

So I moved into town and I "clerked" all around
But the little I made was soon spent,
Yet I kept at it for there was nothing much more
I could do that would pay me a cent.
I worked as a clerk, and I worked like a Turk,
But I couldn't get nowheres at all;
Three years passed on by—my expenses were high—
So I shifted my job in the fall.

Yes, I hired out one day for a little more pay
At some laboring work on a road.
I would sweat in the sun (if it rained—got no mon)
And "dig, dig!" was all that I knowed.
The gang boss would come and bully me dumb,
He bossed us around like a brute,
Well, I stood it a year till one day I went "queer"
And busted him one on his snoot.

That finished me there (so with pockets still bare)
I worked in an auto garage,
I tinkered away (at about the same pay)
A-giving them cars a "massage";
No, I didn't know beans about them there machines
And it took me just three years to learn,
And even by then I was scarce of iron men
So my hands to a new job I'd turn.

This time I got stuck on a job with a truck—
(For driving took almost no brains.)
The wages was fair—but no money to spare—
So I left it to work on the trains.
Then I drifted from there to a factory where
I piddled around for a spell,
I tried out my hand at all jobs in the land,
And now that I've done it—aw, H———!

A man's got to train—got to train his old brain
In one trade and follow it thru,
I've tried every one—and while it was fun,
I'm busted—and you will be, too.
Yes, you will be broke—not a cent in your poke—
Unless you get trained for a trade,
Get trained by the best, then you'll pass all the rest
And roost where the Big Dough is made.

Why, there's thousands like me, just as broke as can be,
Who do all the work—for small pay.
It's so easy to drift—take a job—make a shift—
But you'll never get nowheres that way;
I wish I'd the job that keeps busy friend Bob,
My pal of the days long ago.
He's making his pile and he's living in style,
I had the same chance—that I know.

But Bob TOOK his chance, when we happened to glance
At a Coyne School Electrical ad.
He said "That sure looks good. Gee whiz, if I could
I'd go there and be mighty glad."
Well, I laughed and I said "That there ad you just read
Is the bunk"—but he wouldn't agree—
He wrote to the man and he sized up his plan
And he said "That's the training for ME."

Bob was busted and so things moved along slow
He wanted to go, but was flat,
So he borrowed and went—finished—paid what was lent
And now look where Bobby is at!
He's got his own shop—while me, I'm a flop,
I never was trained—that's just why,
So take it from me, learn a trade and *you'll* be
A-sittin' on top of the sky!

Copyright 1927 By H. C. Lewis

(Note: This rhyme was sent in to me by a man who had finally come to his senses and realized that an un-trained man hasn't a ghost of a show in making money . . Big Money . . today. This man has since gone thru Coyne and is making Real Money—H. C. Lewis, President Coyne Electrical School).

Mr. H. C. Lewis, Pres.
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500 S. Paulina St., Chicago, Ill.

Dear Mr. Lewis: Without obligation send me your big free catalog and all details of Railroad Fare to Chicago, Free Employment Service, Radio, Areoplane and Automotive Courses that are included and how many "earn while learning." I understand I will not be bothered by any salesmen.

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Address .....

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JULES VERNE'S TOMBSTONE AT AMIENS
PORTRAYING HIS IMMORTALITY

AMAZING STORIES

February, 1928
Vol. 2, No. 11

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Owners of Broadcast Station WRNY

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Our Cover

this month shows a view of the earth as seen from the moon, which Baron Münchhausen describes so well in the story, "Baron Münchhausen's Scientific Adventures," by Hugo Gernsback. For the inhabitants of the moon at this particular time, it is "The New Earth." The Baron is getting ready to make a landing on the moon in his marvelous space flyer.

COPYRIGHT ACKNOWLEDGEMENT

"The Master of the World," by Jules Verne, copyright, 1911, by Vincent Parke & Co. (Parke, Austin and Lipscomb Co.)

In Our Next Issue:

THE RETURN OF THE MARTIANS, by Cecil B. White. Being an astronomer, our author is well informed on this subject and in this sequel to *The Retreat to Mars*, he gives us a most unusual as well as powerfully written story, which is not too technical to hold the interest of any reader, no matter what his inclinations might be.

THE ANCIENT HORROR, by Hal Grant. Prehistoric monsters are no novelty in literature, but here is one so totally different and the story is so well written that by the time you are through reading the story, you will not be at all sure that it is not entirely truth that you have read. This is an excellent tale that is sure to give you half-hour's interesting reading.

BARON MUENCHHAUSEN'S ADVENTURE, by Hugo Gernsback. In Instalments 3 and 4 the wily Baron gives us in detail, a picturesque story and description of his space flyer, his trip to the moon, his landing on the moon and his views of the earth from the moon.

THE MASTER OF THE WORLD, (A Serial in Two Parts) Part II, by Jules Verne. In this instalment, the uncanny appearances and disappearances of the mysterious thing that threatens the safety of the world continue until Strock, the Inspector of the Police and head detective, solves the mystery in an extremely unexpected manner.

TEN MILLION MILES SUNWARD, by Geoffrey Hewelcke. We wager that the interest that this story will arouse, will be as great as that of "Doctor Mentiroso." While it has nothing to do with the Fourth Dimension, it evolves a most novel point to change the axis of the earth by human energy. It is one of the cleverest stories of this kind that we have ever seen. And when you have finished the story, we will ask you what is wrong with it.

And others.

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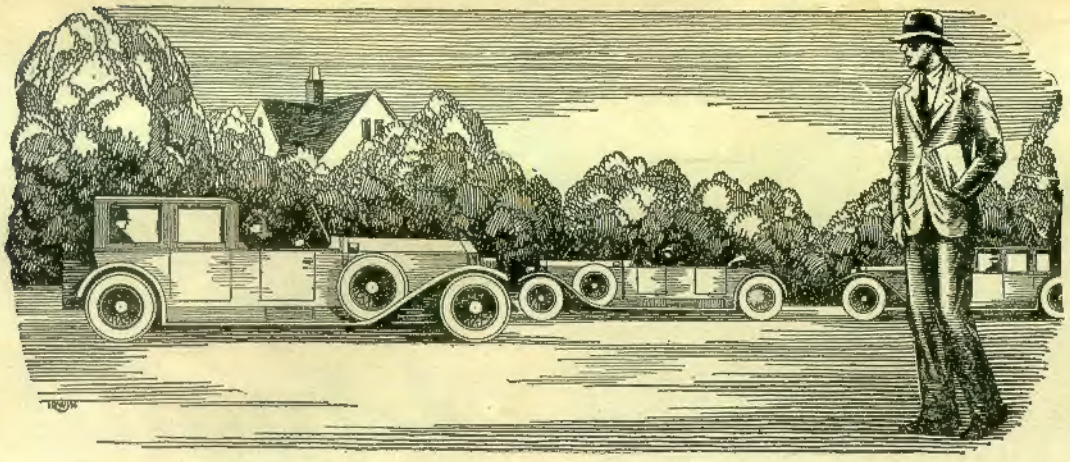

Many times in the old days, while I trudged home after work to save carfare, I used to gaze enviously at the shining cars gliding by me, the prosperous men and women within. Little did I think that inside of a year, I, too, should have my own car, a decent bank account, the good things of life that make it worth living.

I Thought Success Was For Others

Believe It Or Not, Just Twelve Months Ago I Was Next Thing To "Down-and-Out"

TODAY I'm sole owner of the fastest growing Radio store in town. And I'm on good terms with my banker, too—not like the old days only a year ago, when often I didn't have one dollar to knock against another in my pocket. My wife and I live in the snuggest little home you ever saw, right in one of the best neighborhoods. And to think that a year ago I used to dodge the landlady when she came to collect the rent for the little bedroom I called "home"!

It all seems like a dream now, as I look back over the past twelve short months, and think how discouraged I was then, at the "end of a blind alley." I thought I never had had a good chance in my life, and I thought I never would have one. But it was waking up that I needed, and here's the story of how I got it.

I WAS a clerk, working at the usual miserable salary such jobs pay. Somehow I'd never found any way to get into a line where I could make good money.

Other fellows seemed to find opportunities. But—much as I wanted the good things that go with success and a decent income—all the really well-paid vacancies I ever heard of seemed to be out of my line—to call for some kind of knowledge I didn't have.

And I wanted to get married. A fine situation, wasn't it? Mary would have agreed to try it—but it wouldn't have been fair to her.

Mary had told me, "You can't get ahead where you are. Why don't you get into another line of work, somewhere that you can advance?"

"That's fine, Mary," I replied, "but *what* line? I've always got my eyes open for a better job, but I never seem to hear of a really good job that I can handle." Mary didn't seem to be satisfied with the answer, but I didn't know what else to tell her.

It was on the way home that night that I stopped off in the neighborhood drug store, where I overheard a scrap of conversation about myself. A few burning words that were the cause of the turning point in my life!

With a hot flush of shame I turned and left the store, and walked rapidly home. So that was what my neighbors—the people who knew me best—really thought of me!

"Bargain counter sheik—look how that suit fits," one fellow had said in a low voice. "Bet he hasn't got a dollar in those pockets." "Oh, it's just 'Useless' Anderson," said another. "He's got a wish-bone where his back-bone ought to be."

As I thought over the words in deep humiliation, a sudden thought made me catch my breath. Why had Mary been so dissatisfied with my answer that "I hadn't had a chance?" *Did Mary secretly think that too?* And after all, wasn't it *true* that I had a "wish-bone" where my back-bone ought to be? Wasn't that why I never had a "chance" to get ahead? It was true, only too true—and it had taken this cruel blow to my self-esteem to make me see it.

With a new determination I thumbed the pages of a magazine on the table, searching for an advertisement that I'd seen many times but passed up without thinking, an advertisement telling of big opportunities for trained men to succeed in the great new Radio field. With the advertisement was a coupon offering a big free book full of information. I sent the coupon in, and in a few days received a handsome 64-page book, printed in two colors, telling all about the opportunities in the Radio field and how a man can prepare quickly and easily at home to take advantage of these opportunities. I read the book carefully, and when I finished it I made my decision.

WHAT'S happened in the twelve months since that day, as I've already told you, seems almost like a dream to me now. For ten of those twelve months, *I've had a Radio business of my own!* At first, of course, I started it as a little proposition on the side, under the guidance of the National Radio Institute, the outfit that gave me my Radio training. It wasn't long before I was getting so much to do in the Radio line that I quit my measly little clerical job, and devoted my full time to my Radio business.

Since that time I've gone right on up, always under the watchful guidance of my friends at the National Radio Institute. They would have given me just as much help, too, if I had wanted to follow some other line of Radio besides building my own retail business—such as broadcasting, manufacturing, experimenting, sea operating, or any one of the score of lines they prepare you for. And to think that until that day I sent for their eye-opening book, I'd been wailing "I never had a chance!"

NOW I'm making real money. I drive a good-looking car of my own. Mary and I don't own the house in full yet, but I've made a substantial down payment, and I'm not straining myself any to meet the installments.

Here's a real tip. You may not be as bad off as I was. But, think it over—are you satisfied? Are you making enough money, at work that you like? Would you sign a contract to stay where you are now for the next ten years, making the same money? If not, you'd better be *doing* something about it instead of drifting.

This new Radio game is a live-wire field of golden rewards. The work, in any of the 20 different lines of Radio, is fascinating, absorbing, well paid. The National Radio Institute—oldest and largest Radio home-study school in the world—will train you inexpensively in your own home to know Radio from A to Z and to increase your earnings in the Radio field.

Take another tip—No matter what your plans are, no matter how much or how little you know about Radio—clip the coupon below and look their free book over. It is filled with interesting facts, figures, and photos, and the information it will give you is worth a few minutes of anybody's time. You will place yourself under no obligation—the book is free, and is gladly sent to anyone who wants to know about Radio. Just address J. E. Smith, President, National Radio Institute, Dept. 2-A 2, Washington, D. C.

J. E. SMITH President
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Dear Mr. Smith:

Please send me your 64-page free book, printed in two colors, giving all information about the opportunities in Radio and how I can learn quickly and easily at home to take advantage of them. I understand this request places me under no obligation, and that no salesmen will call on me.

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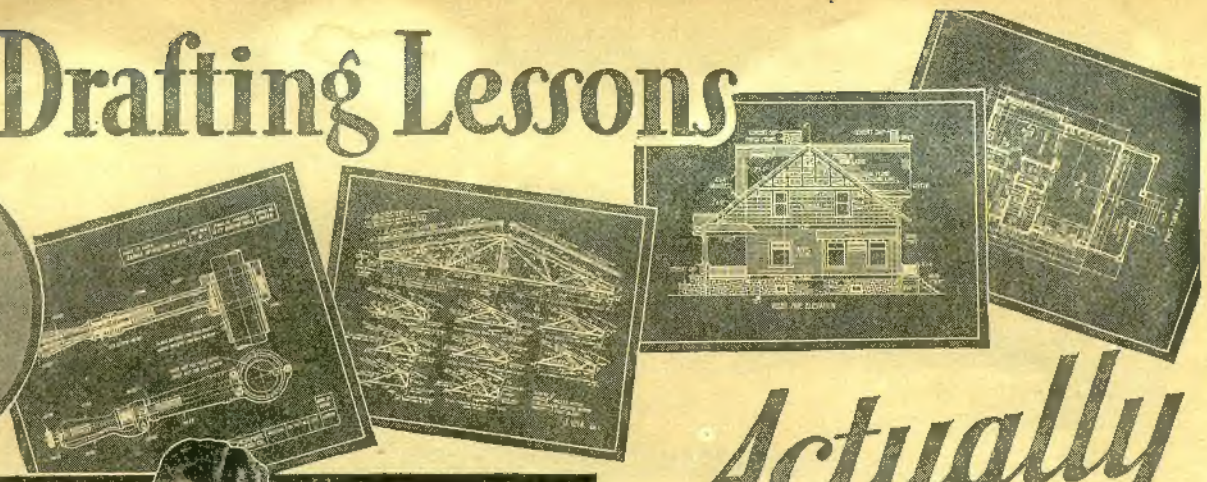
3 Drafting Lessons



Actually free!

to prove you can learn at Home, in spare time!

We have developed a new simplified, rapid way to teach Drafting, and we want to send you three sample lessons *without cost or obligation*. So you can test your own ability to master this fascinating work at home, in your spare time. And see for yourself how quickly and easily *you* can qualify for a fine, well-paid Drafting position.

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Here is a word-for-word copy of the Contract which we have made with 30,000 men in the past three years. I shall be glad to make the same agreement, backed by our entire resources of $1,500,000.00—with YOU!

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VOLUME 2

AMAZING STORIES

THE MAGAZINE OF SCIENTIFICTION

FEBRUARY, 1928
No. 11

The Book Exchange
Magazines Exchanged

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Extravagant Fiction Today - - - - - - - - - - - - Cold Fact Tomorrow

NEW AMAZING STORIES QUARTERLY

By HUGO GERNSBACK

EVER since AMAZING STORIES was first issued, there has been a persistent demand that the magazine be issued twice a month. A number of our readers even announced to us that they wanted to have the magazine issued as a weekly.

We have made an analysis of a great many thousands of letters which we received and have come to the conclusion that our readers actually wanted more amazing stories of the scientifiction type. Accordingly, we made an experiment last summer and issued the AMAZING STORY YEAR BOOK, wherein we featured Edgar Rice Burroughs' story, "The Master Mind of Mars."

Although this book sold at 50c, it enjoyed an excellent sale, and we became convinced that there certainly was a demand for more AMAZING STORIES. Therefore, it has been decided that as a supplement to AMAZING STORIES, we will now publish an AMAZING STORIES QUARTERLY. This will be published four times a year and will be on the newsstands on the following dates:

January 20th — July 20th
April 20th — October 20th

In make-up, it will be similar to the ANNUAL. It will sell for 50c, but will contain a great deal more material than is to be found in the regular issues of AMAZING STORIES. As a matter of fact, it will contain twice as much matter, and will be profusely illustrated.

In the QUARTERLY, we will have a good chance to catch up on our full-length novels, of which we have a great many excellent ones on hand, but which, due to the time element, we cannot publish quickly enough in AMAZING STORIES. The usual full-length novel takes about three issues of AMAZING STORIES, whereas in the new QUARTERLY, we can publish one or more full-length novels each issue.

Heeding the demand of our readers, the QUARTERLY will contain all new stories, with the exception of two.

It will be noticed that the QUARTERLY will be gotten out between dates of AMAZING STORIES, so that both will never come together. This will give you a chance to finish the QUARTERLY before the next issue of AMAZING STORIES comes along again. We believe this system is the best that we could evolve to please all readers of all classes. At least, that is what our exhaustive analysis determined. We shall be very glad to hear from our readers if they approve of the plan. We shall be very grateful for all suggestions.

The first issue will contain the following stories:

WHEN THE SLEEPER WAKES

A Complete Novel

By H. G. WELLS

This, with one or two possible exceptions, is considered Mr. Wells' masterpiece. It shows the author's idea of the world as it will exist centuries hence, with all the wonderful and amazing inventions and changes yet to come! Cities covered entirely with glass—the world enslaved by money, power and machinery—a story so titanic in its strength and action that you will never forget it.

THE *Nth* MAN

A Scientifiction Novelette

By HOMER EON FLINT

This well-known writer has outdone himself in this amazing fantastic piece of scientific literature. What makes giants? Why are Lilliputians two feet high and giants eight and one-half feet tall? What makes the giant turtle of the Galapagos? These turtles, or rather land tortoises, the largest known to science, grow to such immense size that they will support the weight of a number of full-grown men. Furthermore, they live to an enormous age, some of them for over 300 years. Suppose we should learn their secret and apply it to the human race, and rear human beings the size of the Woolworth Building, or even much larger? What would happen then? This is the story of the breeding of *The Nth Man*, really the most amazing scientifiction tale we have seen this year.

THE MOON OF DOOM

An Interplanetary Novelette

By EARL L. BELL

It has often been stated that the discovery of atomic energy by man would have a pronounced effect, not only upon mankind, but possibly upon our entire planetary system. The release of atomic energy would be so tremendous that as a result, it is quite possible that the speed of the earth on its axis might be changed. Such is the theme of our new author's wondrous tale, *The Moon of Doom*—a novel sort of story, that will keep your interest to the end. It is one of the most powerful and absorbing stories that it has been our good fortune to read.

THE ATOMIC RIDDLE

By EDWARD S. SEARS

Knowledge of chemistry and general physics is, of course, constantly increasing, but when this knowledge is used by law-breakers, things are apt to become serious, and sometimes it takes a Professor of Physics to vindicate an innocent man who has become implicated. Here is a real high-powered story, with plenty of action, that you will not soon forget.

THE GRAVITY KING

CLELLAND J. BALL

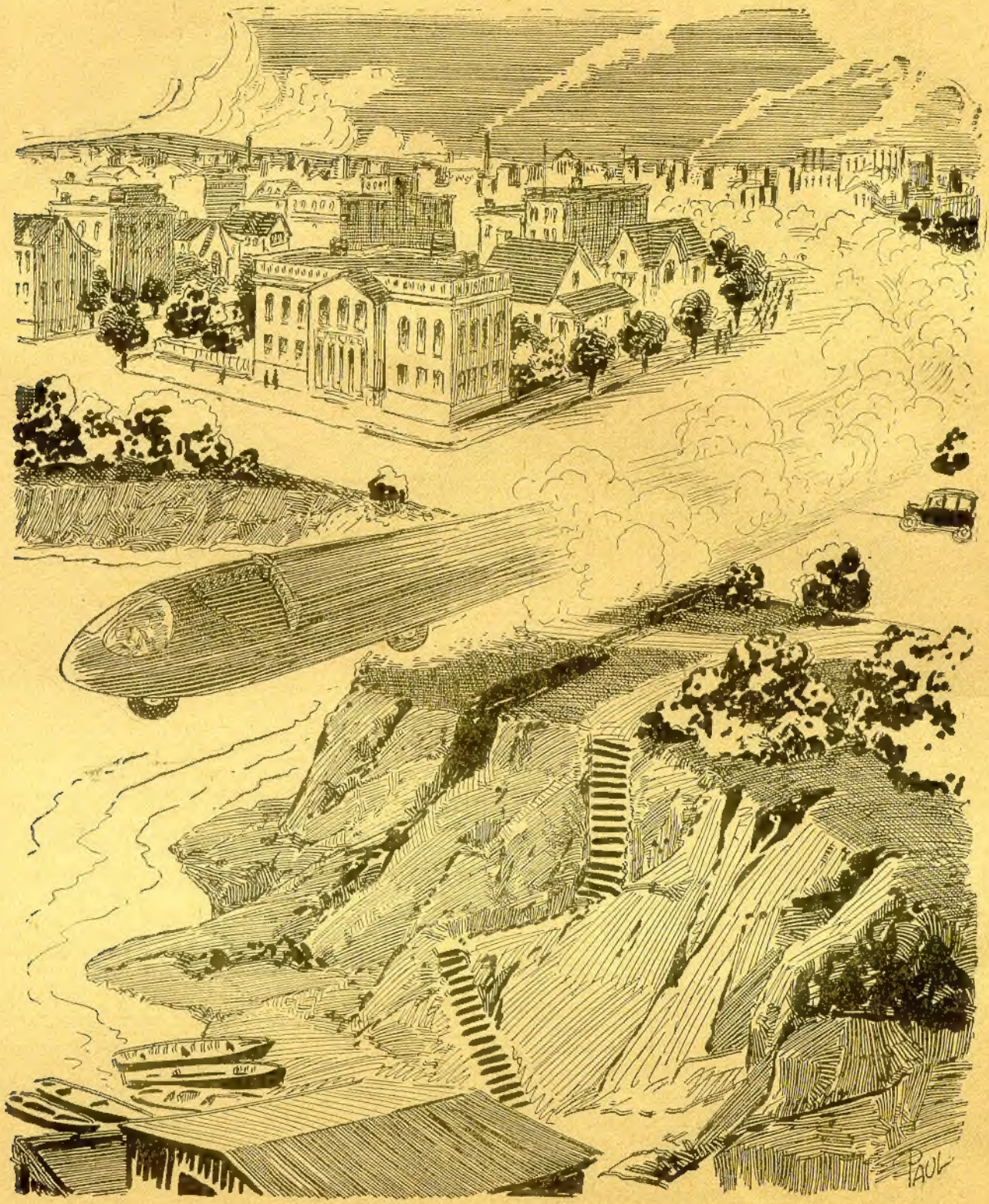
Gravity no doubt is one of the greatest mysteries of the world. We all know what happens when an apple falls down, due to gravity, and we can dimly imagine what would happen if we could stay the apple by negativing gravity. When one man finally solves the problem and uses the knowledge for his own devices, things will happen, which is, indeed, exactly the theme of this story.

Mr. Hugo Gernsback speaks every Tuesday at 9.30 P. M. from WRNY on various scientific and radio subjects.

The MASTER OF THE WORLD

by Jules Verne

A Sequel to "Robur the Conqueror"



. . . The cloud swept by like a hurricane. No one could distinguish what it was that passed with such speed. . . . The apparition passed and disappeared in an instant, leaving behind it a long train of white dust, as an express locomotive leaves behind a train of smoke.

CHAPTER I

What Happened in the Mountains

IF I speak of myself in this story, it is because I have been deeply involved in its startling events, events doubtless among the most extraordinary which this twentieth century will witness. Sometimes I even ask myself if all this has really happened, if its pictures dwell in truth in my memory, and not merely in my imagination. In my position as head inspector in the federal police department in Washington, urged on, moreover, by the desire, which has always been very strong in me, to investigate and understand everything which is mysterious, I naturally became much interested in these remarkable occurrences. And as I have been employed by the Government in various important affairs and secret missions since I was a mere lad, it also happened very naturally that the head of my department placed in my charge this astonishing investigation, wherein I found myself wrestling with so many impenetrable mysteries.

In the remarkable passages of the recital, it is important that you should believe my word. For some of the facts I can bring no other testimony than my own. If you do not wish to believe me, so be it. I can scarce believe it all myself.

The strange occurrences began in the western part of our great American State of North Carolina. There, deep amid the Blue Ridge Mountains, rises the crest called the Great Eyrie. Its huge, rounded form is distinctly seen from the little town of Morganton on the Catawba River, and still more clearly as one approaches the mountains by the way of the village of Pleasant Garden.

Why the name of Great Eyrie was originally given this mountain by the people of the surrounding region, I am not quite sure. It rises rocky and grim and inaccessible, and under certain atmospheric conditions has a peculiarly blue and distant effect. But the idea one would naturally get from the name is of a refuge for birds of prey, eagles, condors, vultures; the home of vast numbers of the feathered tribes, wheeling and screaming above peaks beyond the reach of man. Now the Great Eyrie did not seem particularly attractive to birds; on the contrary, the people of the neighborhood began to remark that on some days, when birds approached its summit, they mounted still further, circled high above the crest, and then flew swiftly away, troubling the air with harsh cries.

Why then the name Great Eyrie? Perhaps the mount might better have been called a crater, for in the center of those steep and mounted walls there might well be a huge, deep basin. Perhaps there might even lie within their circuit a mountain lake, such as exists in other parts of the Appalachian mountain system, a lagoon fed by the rain and the winter snows.

In brief, was this not the site of an ancient volcano, one which had slept through ages, but whose inner fires might yet reawake? Might not the Great Eyrie reproduce in its neighborhood the violence of Mount Krakatoa or the terrible disaster of Mont Pelée? If there were indeed a central lake, was there not danger that its waters, penetrating the strata beneath, would be turned to steam by the volcanic fires and tear their way forth in a tremendous explosion, deluging the fair plains of Carolina with an eruption such as that of 1902 in Martinique?

Indeed, with regard to this last possibility there had been certain symptoms recently observed which might well be due to volcanic action. Smoke had floated above the mountain and once the country folk passing near had heard subterranean noises, unexplainable rumblings. A glow in the sky had crowned the summit at night.

When the wind blew the smoky cloud eastward toward Pleasant Garden, a few cinders and ashes drifted down from it. And finally, one stormy night, pale flames, reflected from the clouds above the summit, cast upon the district below a sinister, warning light.

In presence of these strange phenomena, it is not astonishing that the people of the surrounding district became seriously disquieted. And to the disquiet was joined an imperious need of knowing the true condition of the mountain. The Carolina newspapers had flaring headlines, "The Mystery of Great Eyrie." They asked if it was not dangerous to dwell in such a region. Their articles aroused curiosity and fear—curiosity among those who, being in no danger themselves, were interested in the disturbance merely as a strange phenomenon of nature, fear in those who were likely to be the victims, if a catastrophe actually occurred. Those more immediately threatened were the citizens of Morganton, and even more the good folk of Pleasant Garden and of the hamlets and farms yet closer to the mountain.

Assuredly it was regrettable that mountain climbers had not previously attempted to ascend to the summit of the Great Eyrie. The cliffs of rock which surrounded it had never been scaled. Perhaps they might offer no path by which even the most daring climber could penetrate to the interior. Yet, if a volcanic eruption menaced all the western region of the Carolinas, then a complete examination of the mountain was become absolutely necessary.

Now before the actual ascent of the crater, with its many serious difficulties, was attempted, there was one way which offered an opportunity of reconnoitering the interior, without clambering up the precipices. In the first days of September of that memorable year, a well-known aeronaut named Wilker came to Morganton with his balloon. By waiting for a breeze from the East, he could easily rise in his balloon and drift over the Great Eyrie. There, from a safe height above, he could search with a powerful glass into its depths. Thus he would know if the mouth of a volcano really opened amid the mighty rocks. This was the principal question. If this were settled it would be known whether the surrounding country must fear an eruption at some period more or less distant.

The ascension was begun according to the program suggested. The wind was fair and steady;

THIS is a sequel to the preceding story, "Robur the Conqueror," published in the December and January issues of AMAZING STORIES. *In the present story, Jules Verne begins the tale of the exploits of a most wonderful machine, such as even we of today do not possess. It is one of the few prophecies of Jules Verne, which has not as yet been realized. There are many engineers who claim that such a machine, which is at once, airship, automobile and submarine, will never be realized, but there is a school which claims that it is not beyond the pale of possibility. You will read this story with absorbing interest.*

the sky clear; the morning clouds were disappearing under the vigorous rays of the sun. If the interior of the Great Eyrie was not filled with smoke, the aeronaut would be able to search with his glass its entire extent. If the vapors were rising, he, no doubt, could detect their source.

The balloon rose at once to a height of fifteen hundred feet, and there rested almost motionless for a quarter of an hour. Evidently the east wind, which was brisk upon the surface of the earth, did not make itself felt at that height. Then by an unlucky chance, the balloon was caught in an adverse current, and began to drift toward the east. Its distance from the mountain chain rapidly increased. Despite all the efforts of the aeronaut, the citizens of Morganton saw the balloon disappear on the wrong horizon. Later, they learned that it had landed in the neighborhood of Raleigh, the capital of North Carolina.

This attempt having failed, it was agreed that it should be tried again under better conditions. Indeed, fresh rumblings were heard from the mountain, accompanied by heavy clouds and wavering glimmerings of light at night. Folk began to realize that the Great Eyrie was a serious and perhaps imminent source of danger. Yes, the entire country lay under the threat of some seismic or volcanic disaster.

During the first days of April of that year, these more or less vague apprehensions turned to actual panic. The newspapers gave prompt echo to the public terror. The entire district between the mountains and Morganton was sure that an eruption was at hand.

The night of the fourth of April, the good folk of Pleasant Garden were awakened by a sudden uproar. They thought that the mountains were falling upon them. They rushed from their houses, ready for instant flight, fearing to see open before them some immense abyss, engulfing the farms and villages for miles around.

The night was very dark. A weight of heavy clouds pressed down upon the plain. Even had it been day the crest of the mountains would have been invisible.

In the midst of this impenetrable obscurity, there was no response to the cries which arose from every side. Frightened groups of men, women, and children groped their way along the black roads in wild confusion. From every quarter came the screaming voices: "It is an earthquake." "It is an eruption." "Whence comes it?" "From the Great Eyrie."

Into Morganton sped the news that stones, lava, ashes, were raining down upon the country.

Shrewd citizens of the town, however, observed that if there were an eruption the noise would have continued and increased, the flames would have appeared above the crater; or at least their lurid reflections would have penetrated the clouds. Now, even these reflections were no longer seen. If there had been an earthquake, the terrified people saw that at least their houses had not crumbled beneath the shock. It was possible that the uproar had been caused by an avalanche, or by the fall of some mighty rock from the summit of the mountains.

An hour passed without further incident. A wind from the west sweeping over the long chain of the Blue Ridge, set the pines and hemlocks wailing on the higher slopes. There seemed no new cause for panic; and folk began to return to their houses. All, however, awaited impatiently the return of the day.

Then suddenly, toward three o'clock in the morning, came another alarm. Flames leaped up above the rocky wall of the Great Eyrie. Reflected from the clouds, they illuminated the atmosphere for a great distance. A crackling, as if of many burning trees, was heard.

Had a fire spontaneously broken out? And to what cause was it due? Lightning could not have started the conflagration, for no thunder had been heard. True, there was plenty of material for fire; at this height the chain of the Blue Ridge is well wooded. But these flames were too sudden for any ordinary cause.

"An eruption!" "An eruption!"

The cry resounded from all sides. An eruption. The Great Eyrie was then indeed the crater of a volcano buried in the bowels of the mountains. And after so many years, so many ages even, had it reawakened? Added to the flames, was a rain of stones and ashes about to follow? Were the lavas going to pour down torrents of molten fire, destroying everything in their passage, annihilating the towns, the villages, the farms, all this beautiful world of meadows, fields and forests, even as far as Pleasant Garden and Morganton?

This time the panic was overwhelming; nothing could stop it. Women, crazed with terror, carrying their infants, rushed along the eastward roads. Men, deserting their homes, made hurried bundles of their most precious belongings and set free their livestock, cows, sheep, pigs, which fled in all directions. What disorder resulted from this agglomeration, human and animal, under darkest night, amid forests, threatened by the fires of the volcano, along the border of marshes whose waters might be upheaved and overflow, with the earth itself threatening to disappear from under the feet of the fugitives! Would they be in time to save themselves, if a cascade of glowing lava came rolling down the slope of the mountain across their route?

Nevertheless, some of the chief and shrewder farm owners were not swept away in this mad flight, which they did their best to restrain. Venturing within a mile of the mountain, they saw that the glare of the flames was decreasing. In truth it hardly seemed that the region was immediately menaced by any further upheaval. No stones were being hurled into space; no torrent of lava was visible upon the slopes; no rumblings rose from the ground. There was no further manifestation of any seismic disturbance capable of overwhelming the land.

At length, the flight of the fugitives ceased at a distance where they seemed secure from all danger. Then a few ventured back toward the mountain. Some farms were reoccupied before the break of day.

By morning the crests of the Great Eyrie showed scarcely the least remnant of its cloud of smoke. The fires were certainly at an end; and if it were impossible to determine their cause, one might at least hope that they would not break out again.

It appeared possible that the Great Eyrie had not really been the theater of volcanic phenomena at all. There was no further evidence that the neighborhood was at the mercy either of eruptions or of earthquakes.

Yet once more, about five o'clock, from beneath the ridge of the mountain, where the shadows of

night still lingered, a strange noise swept across the air, a sort of whirring, accompanied by the beating of mighty wings. And had it been a clear day, perhaps the farmers would have seen the passage of a mighty bird of prey, some monster of the skies, which, having risen from the Great Eyrie, sped away toward the east.

CHAPTER II

I Reach Morganton

THE twenty-seventh of April, having left Washington the night before, I arrived at Raleigh, the capital of the state of North Carolina. Two days before, the head of the federal police had called me to his room. He was awaiting me with some impatience. "John Strock," said he, "are you still the man who on so many occasions has proven to me both his devotion and his ability?"

"Mr. Ward," I answered with a bow, "I cannot promise success or even ability, but as to devotion, I assure you, it is yours."

"I do not doubt it," responded the chief. "And I will ask you instead this more exact question: Are you as fond of riddles as ever? As eager to penetrate into mysteries, as I have known you before?"

"I am, Mr. Ward."

"Good, Strock, then listen."

Mr. Ward, a man of about fifty years, of great power and intellect, was fully master of the important position he filled. He had several times entrusted to me difficult missions which I had accomplished successfully, and which had won me his confidence. For several months past, however, he had found no occasion for my services. Therefore I awaited with impatience what he had to say. I did not doubt that his questioning implied a serious and important task for me.

"Doubtless you know," said he, "what has happened down in the Blue Ridge Mountains near Morganton."

"Surely, Mr. Ward. The phenomena reported from there have been singular enough to arouse anyone's curiosity."

"They are singular, even remarkable, Strock. No doubt about that. But there is also reason to ask if these phenomena about the Great Eyrie are not a source of continued danger to the people there, if they are not forerunners of some disaster as terrible as it is mysterious."

"It is to be feared, sir."

"So we must know, Strock, what is inside of that mountain. If we are helpless in the face of some great force of nature, people must be warned in time of the danger which threatens them."

"It is clearly the duty of the authorities, Mr. Ward," responded I, "to learn what is going on within there."

"True, Strock; but that presents great difficulties. Everyone reports that it is impossible to scale the precipices of the Great Eyrie and reach its interior. But has anyone ever attempted it with scientific appliances and under the best conditions? I doubt it, and believe a resolute attempt may bring success."

"Nothing is impossible, Mr. Ward; what we face here is merely a question of expense."

"We must not regard expense when we are seeking to reassure an entire population, or to preserve it from a catastrophe. There is another suggestion I would make to you. Perhaps this Great Eyrie is not so inaccessible as is supposed. Perhaps a band of malefactors have secreted themselves there, gaining access by ways known only to themselves."

"What, you suspect that robbers—"

"Perhaps I am wrong, Strock; and these strange sights and sounds have all had natural causes. Well, that is what we have to settle, and as quickly as possible."

"I have one question to ask."

"Go ahead, Strock."

"When the Great Eyrie has been visited, when we know the source of these phenomena, if there really is a crater there and an eruption is imminent, can we avert it?"

"No, Strock; but we can estimate the extent of the danger. If some volcano in the Alleghanies threatens North Carolina with a disaster similar to that of Martinique, buried beneath the outpourings of Mont Pelée, then these people must leave their homes—"

"I hope, sir, there is no such widespread danger."

"I think not, Strock; it seems to me highly improbable that an active volcano exists in the Blue Ridge mountain chain. Our Appalachian mountain system is nowhere volcanic in its origin. But all these events cannot be without basis. In short, Strock, we have decided to make a strict inquiry into the phenomena of the Great Eyrie, to gather all the testimony, to question the people of the towns and farms. To do this, I have made choice of an agent in whom we have full confidence; and this agent is you, Strock."

"Good. I am ready, Mr. Ward," cried I, "and be sure that I shall neglect nothing to bring you full information."

"I know it, Strock, and I will add that I regard you as specially fitted for the work. You will have a splendid opportunity to exercise, and I hope to satisfy, your favorite passion of curiosity."

"As you say, sir."

"You will be free to act according to circumstances. As to expenses, if there seems reason to organize an ascension party, which will be costly, you have *carte blanche*."

"I will act as seems best, Mr. Ward."

"Let me caution you to act with all possible discretion. The people in the vicinity are already overexcited. It will be well to move secretly. Do not mention the suspicions I have suggested to you. And above all, avoid arousing any fresh panic."

"It is understood."

"You will be accredited to the Mayor of Morganton, who will assist you. Once more, be prudent, Strock, and acquaint no one with your mission, unless it is absolutely necessary. You have often given proofs of your intelligence and address; and this time I feel assured you will succeed."

I asked him only, "When shall I start?"

"To-morrow."

"To-morrow, I shall leave Washington; and the day after, I shall be at Morganton."

How little suspicion had I of what the future had in store for me!

I returned immediately to my house, where I made my preparations for departure; and the next evening found me in Raleigh. There I passed the night, and in the course of the next afternoon arrived at the railroad station of Morganton.

Morganton is but a small town, built upon strata of the Jurassic period, particularly rich in coal. Its

mines give it some prosperity. It also has numerous unpleasant mineral waters, so that the season there attracts many visitors. Around Morganton is a rich farming country, with broad fields of grain. It lies in the midst of swamps, covered with mosses and reeds. Evergreen forests rise high up the mountain slopes. All that the region lacks is the wells of natural gas, that invaluable natural source of power, light and warmth, so abundant in most of the Alleghany valleys. Villages and farms are numerous up to the very borders of the mountain forests. Thus there were many thousands of people threatened, if the Great Eyrie proved indeed a volcano, if the convulsions of nature extended to Pleasant Garden and to Morganton.

The mayor of Morganton, Mr. Elias Smith, was a tall man, vigorous and enterprising, forty years old or more, and of a health to defy all the doctors of the two Americas. He was a great hunter of bears and panthers, beasts which may still be found in the wild gorges and mighty forests of the Alleghanies.

Mr. Smith was himself a rich land-owner, possessing several farms in the neighborhood. Even his most distant tenants received frequent visits from him. Indeed, whenever his official duties did not keep him in his so-called home at Morganton, he was exploring the surrounding country, irresistibly drawn by the instincts of the hunter.

I went at once to the house of Mr. Smith. He was expecting me, having been warned by telegram. He received me very frankly, without any formality, his pipe in his mouth, a glass of brandy on the table. A second glass was brought in by a servant, and I had to drink to my host before beginning our interview.

"Mr. Ward sent you," said he to me in a jovial tone. "Good; let us drink to Mr. Ward's health."

I clinked glasses with him, and drank in honor of the chief of police.

"And now," demanded Elias Smith, "what is worrying him?"

At this I made known to the mayor of Morganton the cause and the purpose of my mission in North Carolina. I assured him that my chief had given me full power, and would render me every assistance, financial and otherwise, to solve the riddle and relieve the neighborhood of its anxiety relative to the Great Eyrie.

Elias Smith listened to me without uttering a word, but not without several times refilling his glass and mine. While he puffed steadily at his pipe, the close attention which he gave me was beyond question. I saw his cheeks flush at times, and his eyes gleam under their bushy brows. Evidently the chief magistrate of Morganton was uneasy about Great Eyrie, and would be as eager as I to discover the cause of these phenomena.

When I had finished my communication, Elias Smith gazed at me for some moments in silence. Then he said, softly, "So at Washington they wish to know what the Great Eyrie hides within its circuit?"

"Yes, Mr. Smith."

"And you, also?"

"I do."

"So do I, Mr Strock"

He and I were as one in our curiosity.

"You will understand," added he, knocking the cinders from his pipe, "that as a land-owner, I am much interested in these stories of the Great Eyrie, and as mayor, I wish to protect my constituents."

"A double reason," I commented, "to stimulate you to discover the cause of these extraordinary occurrences! Without doubt, my dear Mr. Smith, they have appeared to you as inexplicable and threatening as to your people."

"Inexplicable, certainly, Mr. Strock. For on my part, I do not believe it possible that the Great Eyrie can be a volcano; the Alleghanies are nowhere of volcanic origin. I, myself, in our immediate district, have never found any geological traces of scoria, or lava, or any eruptive rock whatever. I do not think, therefore, that Morganton can possibly be threatened from such a source."

"You really think not, Mr. Smith?"

"Certainly."

"But these tremblings of the earth that have been felt in the neighborhood!"

"Yes, these tremblings! These tremblings!" repeated Mr. Smith, shaking his head; "but in the first place, is it certain that there have been tremblings? At the moment when the flames showed most sharply, I was on my farm of Wildon, less than a mile from the Great Eyrie. There was certainly a tumult in the air, but I felt no quivering of the earth."

"But in the reports sent to Mr. Ward—"

"Reports made under the impulse of the panic," interrupted the mayor of Morganton. "I said nothing of any earth tremors in mine."

"But as to the flames which rose clearly above the crest?"

"Yes, as to those, Mr. Strock, that is different. I saw them; saw them with my own eyes, and the clouds certainly reflected them for miles around. Moreover, noises certainly came from the crater of the Great Eyrie, hissings, as if a great boiler were letting off steam."

"You have reliable testimony of this?"

"Yes, the evidence of my own ears."

"And in the midst of this noise, Mr. Smith, did you believe that you heard that most remarkable of all the phenomena, a sound like the flapping of great wings?"

"I thought so, Mr. Strock; but what mighty bird could this be, which flew away after the flames had died down, and what wings could ever make such tremendous sounds. I therefore seriously question, if this must not have been a deception of my imagination. The Great Eyrie a refuge for unknown monsters of the sky! Would they not have been seen long since, soaring above their immense nest of stone? In short, there is in all this a mystery, which has not yet been solved."

"But we will solve it, Mr. Smith, if you will give me your aid."

"Surely, Mr. Strock; to-morrow we will start our campaign."

"To-morrow." And on that word the mayor and I separated. I went to a hotel, and established myself for a stay which might be indefinitely prolonged. Then, having dined, and written to Mr. Ward, I saw Mr. Smith again in the afternoon, and arranged to leave Morganton with him at daybreak.

Our first purpose was to undertake the ascent of the mountain, with the aid of two experienced guides. These men had ascended Mt. Mitchell and others of the highest peaks of the Blue Ridge. They had never, however, attempted the Great Eyrie, knowing that its walls of inaccessible cliffs defended it on

every side. Moreover, before the recent startling occurrences, the Great Eyrie had not particularly attracted the attention of tourists. Mr. Smith knew the two guides personally as men daring, skillful and trustworthy. They would stop at no obstacle; and we were resolved to follow them through everything.

Moreover, Mr. Smith remarked at the last that perhaps it was no longer as difficult as formerly to penetrate within the Great Eyrie.

"And why?" asked I.

"Because a huge block has recently broken away from the mountainside and perhaps it has left a practicable path or entrance."

"That would be a fortunate chance, Mr. Smith."

"We shall know all about it, Mr. Strock, no later than to-morrow."

"Till to-morrow, then."

CHAPTER III

The Great Eyrie

THE next day at dawn, Elias Smith and I left Morganton by a road which, winding along the left bank of the Catawba River, led to the village of Pleasant Garden. The guides accompanied us, Harry Horn, a man of thirty, and James Bruck, aged twenty-five. They were both natives of the region, and in constant demand among the tourists who climbed the peaks of the Blue Ridge and Cumberland Mountains.

A light wagon with two good horses was provided to carry us to the foot of the range. It contained provisions for two or three days, beyond which our trip surely would not be protracted. Mr. Smith had shown himself a generous provider both in meats and in liquors. As to water, the mountain springs would furnish it in abundance, increased by the heavy rains, frequent in that region during springtime.

It is needless to add that the Mayor of Morganton in his rôle of hunter, had brought along his gun and his dog, Nisko, who gamboled joyously about the wagon. Nisko, however, was to remain behind at the farm at Wildon, when we attempted our ascent. He could not possibly follow us up the Great Eyrie with its cliffs to scale and its crevasses to cross.

The day was beautiful, the fresh air in that climate is still cool of an April morning. A few fleecy clouds sped rapidly overhead, driven by a light breeze which swept across the long plains, from the distant Atlantic. The sun, peeping forth at intervals, illumined all the fresh young verdure of the countryside

An entire world animated the woods through which we passed From before our equipage fled squirrels, field-mice, parroquets of brilliant colors and deafening loquacity Opossums passed in hurried gait, bearing their young in their pouches Myriads of birds were scattered amid the foliage of maples, pines and masses of rhododendrons, so luxuriant that their thickets were impenetrable

We arrived that evening at Pleasant Garden, where we were comfortably located for the night with the mayor of the town, a particular friend of Mr Smith Pleasant Garden proved little more than a village, but its mayor gave us a warm and generous reception, and we supped pleasantly in his charming home, which stood beneath the shades of some giant beech-trees.

Naturally the conversation turned upon our attempt to explore the interior of the Great Eyrie. "You are right," said our host, "until we all know what is hidden within there, our people will remain uneasy."

"Has nothing new occurred," I asked, "since the last appearance of flames above the Great Eyrie?"

"Nothing, Mr. Strock. From Pleasant Garden we can see the entire crest of the mountain. Not a suspicious noise has come down to us. Not a spark has risen. If a legion of devils is in hiding there, they must have finished their infernal cookery, and soared away to some other haunt."

"Devils!" cried Mr. Smith. "Well, I hope they have not decamped without leaving some traces of their occupation, some parings of hoofs or horns or their tails. We shall find them out."

On the morrow, the twenty-ninth of April, we started again at dawn. By the end of this second day, we expected to reach the farm of Wildon at the foot of the mountain. The country was much the same as before, except that our road led more steeply upward. Woods and marshes alternated, though the latter grew sparser, being drained by the sun as we approached the higher levels. The country was also less populous. There were only a few little hamlets, almost lost beneath the beech trees, a few lonely farms, abundantly watered by the many streams that rushed downward toward the Catawba River.

The smaller birds and beasts grew yet more numerous. "I am much tempted to take my gun," said Mr. Smith, "and to go off with Nisko. This will be the first time that I have passed here without trying my luck with the partridges and hares. The good beasts will not recognize me. But not only have we plenty of provisions, but we have a bigger chase on hand to-day The chase of a mystery."

"And let us hope," added I, "we do not come back disappointed hunters."

In the afternoon the whole chain of the Blue Ridge stretched before us at a distance of only six miles. The mountain crests were sharply outlined against the clear sky. Well wooded at the base, they grew more bare and showed only stunted evergreens toward the summit. There the scraggly trees, grotesquely twisted, gave to the rocky heights a bleak and bizarre appearance. Here and there the ridge rose in sharp peaks. On our right the Black Mountains, nearly seven thousand feet high, reared their gigantic head, sparkling at times high above the clouds.

"Have you ever climbed that mountain, Mr. Smith?" I asked.

"No," answered he, "but I am told that it is a very difficult ascent. A few mountaineers have climbed it; but they report that it has no outlook commanding the crater of the Great Eyrie."

"That is so," said the guide, Harry Horn. "I have tried it myself."

"Perhaps," suggested I, "the weather was unfavorable."

"On the contrary, Mr Strock, it was unusually clear. But the wall of the Great Eyrie on that side rose so high, it completely hid the interior"

"Forward," cried Mr Smith. "I shall not be

sorry to set foot where no person has ever stepped, or even looked, before."

Certainly on this day the Great Eyrie looked tranquil enough. As we gazed upon it, there rose from its heights neither smoke nor flame.

Toward five o'clock our expedition halted at the Wildon farm, where the tenants warmly welcomed their landlord. The farmer assured us that nothing notable had happened about the Great Eyrie for some time. We supped at a common table with all the people of the farm; and our sleep that night was sound and wholly untroubled by premonitions of the future.

On the morrow, before break of day, we set out for the ascent of the mountain. The height of the Great Eyrie scarce exceeds five thousand feet. A modest altitude, often surpassed in this section of the Appalachians. As we were already more than three thousand feet above sea level, the fatigue of the ascent could not be great. A few hours should suffice to bring us to the edge of the crater. Of course, difficulties might present themselves, precipices to scale, clefts and breaks in the ridge might necessitate painful and even dangerous detours. This was the unknown, the spur to our attempt. As I said, our guides knew no more than we upon this point. What made me anxious, was, of course, the common report that the Great Eyrie was wholly inaccessible. But this remained unproven. And then there was the new chance that a fallen block had left a breach in the rock wall.

"At last," said Mr. Smith to me, after lighting the first pipe of the twenty or more which he smoked each day, "we are well started. As to whether the ascent will take more or less time——"

"In any case, Mr. Smith," interrupted I, "you and I are fully resolved to pursue our quest to the end."

"Fully resolved, Mr. Strock."

"My chief has charged me to snatch the secret from this demon of the Great Eyrie."

"We will snatch it from him, willing or unwilling," vowed Mr. Smith, calling Heaven to witness. "Even if we have to search the very bowels of the mountain."

"As it may happen, then," said I, "that our excursion will be prolonged beyond to-day, it will be well to look to our provisions."

"Be easy, Mr. Strock; our guides have food for two days in their knapsacks, besides what we carry ourselves. Moreover, though I left my brave Nisko at the farm, I have my gun. Game will be plentiful in the woods and gorges of the lower part of the mountain, and perhaps at the top we shall find a fire to cook it, already lighted."

"Already lighted, Mr. Smith?"

"And why not, Mr. Strock? These flames! These superb flames, which have so terrified our country folk! Is their fire absolutely cold, is no spark to be found beneath their ashes? And then, if this is truly a crater, is the volcano so wholly extinct that we cannot find there a single ember? Bah! This would be but a poor volcano if it hasn't enough fire even to cook an egg or roast a potato. Come, I repeat, we shall see! We shall see!"

At that point of the investigation I had, I confess, no opinion formed. I had my orders to examine the Great Eyrie. If it proved harmless, I would announce it, and people would be reassured But at heart, I must admit, I had the very natural desire of a man possessed by the demon of curiosity. I should be glad, both for my own sake, and for the renown which would attach to my mission if the Great Eyrie proved the center of the most remarkable phenomena—of which I would discover the cause.

OUR ascent began in this order. The two guides went in front to seek out the most practicable paths. Elias Smith and I followed more leisurely. We mounted by a narrow and not very steep gorge amid rocks and trees. A tiny stream trickled downward under our feet. During the rainy season or after a heavy shower, the water doubtless bounded from rock to rock in tumultuous cascades. But it evidently was fed only by the rain, for now we could scarcely trace its course. It could not be the outlet of any lake within the Great Eyrie.

After an hour of climbing, the slope became so steep that we had to turn, now to the right, now to the left; and our progress was much delayed. Soon the gorge became wholly impracticable; its cliff-like sides offered no sufficient foothold. We had to cling by branches, to crawl upon our knees. At this rate the top would not be reached before sundown.

"Faith!" cried Mr. Smith, stopping for breath, "I realize why the climbers of the Great Eyrie have been few, so few, that it has never been ascended within my knowledge."

"The fact is," I responded, "that it would be much toil for very little profit. And if we had not special reasons to persist in our attempt——"

"You never said a truer word," declared Harry Horn. "My comrade and I have scaled the Black Dome several times, but we never met such obstacles as these."

"The difficulties seem almost impassable," added James Bruck

The question now was to determine to which side we should turn for a new route; to right, as to left, arose impenetrable masses of trees and bushes. In truth even the scaling of cliffs would have been more easy. Perhaps if we could get above this wooded slope we could advance with surer foot. Now, we could only go ahead blindly, and trust to the instincts of our two guides. James Bruck was especially useful. I believe that that gallant lad would have equaled a monkey in lightness and a wild goat in agility. Unfortunately, neither Elias Smith nor I was able to climb where he could

However, when it is a matter of real need with me, I trust I shall never be backward, being resolute by nature and well-trained in bodily exercise. Where James Bruck went, I was determined to go, also though it might cost me some uncomfortable falls. But it was not the same with the first magistrate of Morganton, less young, less vigorous, larger, stouter, and less persistent than we others. Plainly he made every effort, not to retard our progress, but he panted like a seal, and soon I insisted on his stopping to rest.

In short, it was evident that the ascent of the Great Eyrie would require far more time than we had estimated. We had expected to reach the foot of the rocky wall before eleven o'clock, but we now saw that mid-day would still find us several hundred feet below it.

Toward ten o'clock, after repeated attempts to discover some more practicable route, after num-

berless turnings and returnings, one of the guides gave the signal to halt. We found ourselves at last on the upper border of the heavy wood. The trees, more thinly spaced, permitted us a glimpse upward to the base of the rock wall which constituted the true Great Eyrie.

"Whew!" exclaimed Mr. Smith, leaning against a mighty pine tree, "a little respite, a little repose, and even a little repast would not go badly."

"We will rest an hour," said I.

"Yes; after working our lungs and our legs, we will make our stomachs work."

We were all agreed on this point. A rest would certainly freshen us. Our only cause for inquietude was now the appearance of the precipitous slope above us. We looked up toward one of those bare strips called in that region, slides. Amid this loose earth, these yielding stones, and these abrupt rocks there was no roadway.

Harry Horn said to his comrade, "It will not be easy."

"Perhaps impossible," responded Bruck

Their comments caused me secret uneasiness. If I returned without even having scaled the mountain, my mission would be a complete failure, without speaking of the torture to my curiosity. And when I stood again before Mr. Ward, shamed and confused, I should cut but a sorry figure.

We opened our knapsacks and lunched moderately on bread and cold meat. Our repast finished, in less than half an hour, Mr. Smith sprang up eager to push forward once more. James Bruck took the lead; and we had only to follow him as best we could.

We advanced slowly. Our guides did not attempt to conceal their doubt and hesitation. Soon Horn left us and went far ahead to spy out which road promised most chance of success.

Twenty minutes later he returned and led us onward toward the northwest. It was on this side that the Black Dome rose at a distance of three or four miles. Our path was still difficult and painful, amid the sliding stones, held in place only occasionally by wiry bushes. At length after a weary struggle, we gained some two hundred feet further upward and found ourselves facing a great gash, which broke the earth at this spot. Here and there were scattered roots recently uptorn, branches broken off, huge stones reduced to powder, as if an avalanche had rushed down this flank of the mountain

"That must be the path taken by the huge block which broke away from the Great Eyrie," commented James Bruck.

"No doubt," answered Mr. Smith, "and I think we had better follow the road that it has made for us."

It was indeed this gash that Harry Horn had selected for our ascent Our feet found lodgment in the firmer earth which had resisted the passage of the monster rock Our task thus became much easier, and our progress was in a straight line upward, so that toward half past eleven we reached the upper border of the "slide"

Before us, less than a hundred feet away, but towering a hundred feet straight upwards in the air rose the rock wall, which formed the final crest, the last defence of the Great Eyrie

From this side, the summit of the wall showed capriciously irregular, rising in rude towers and jagged needles. At one point the outline appeared to be an enormous eagle silhouetted against the sky, just ready to take flight. Upon this side, at least, the precipice was insurmountable.

"Rest a minute," said Mr. Smith, "and we will see if it is possible to make our way around the base of this cliff."

"At any rate," said Harry Horn, "the great block must have fallen from this part of the cliff; and it has left no breach for entering."

They were both right; we must seek entrance elsewhere. After a rest of ten minutes, we clambered up close to the foot of the wall, and began to make a circuit of its base.

Assuredly the Great Eyrie now took on to my eyes an aspect absolutely fantastic. Its heights seemed peopled by dragons and huge monsters. If chimeras, griffins, and all the creations of mythology had appeared to guard it, I should have been scarcely surprised.

With great difficulty and not without danger we continued our tour of this circumvallation, where it seemed that nature had worked as man does, with careful regularity. Nowhere was there any break in the fortification; nowhere a fault in the strata by which one might clamber up. Always this mighty wall, a hundred feet in height!

After an hour and a half of this laborious circuit, we regained our starting-place. I could not conceal my disappointment, and Mr. Smith was not less chagrined than I.

"A thousand devils!" cried he, "we know no better than before what is inside this confounded Great Eyrie, nor even if it is a crater."

"Volcano, or not," said I, "there are no suspicious noises now; neither smoke nor flame rises above it; nothing whatever threatens an eruption."

This was true. A profound silence reigned around us; and a perfectly clear sky shone overhead. We tasted the perfect calm of great altitudes.

It was worth noting that the circumference of the huge wall was about twelve or fifteen hundred feet. As to the space enclosed within, we could scarce reckon that without knowing the thickness of the encompassing wall. The surroundings were absolutely deserted. Probably not a living creature ever mounted to this height, except the few birds of prey which soared high above us.

Our watches showed three o'clock, and Mr. Smith cried in disgust, "What is the use of stopping here all day! We shall learn nothing more. We must make a start, Mr. Strock, if we want to get back to Pleasant Garden to-night."

I made no answer, and did not move from where I was seated; so he called again, "Come, Mr. Strock; you don't answer."

In truth, it cut me deeply to abandon our effort, to descend the slope without having achieved my mission. I felt an imperious need of persisting; my curiosity had redoubled. But what could I do? Could I tear open this unyielding earth? Overleap the mighty cliff? Throwing one last defiant glare at the Great Eyrie, I followed my companions.

The return was effected without great difficulty. We had only to slide down where we had so laboriously scrambled up. Before five o'clock we descended the last slopes of the mountain, and the farmer of Wildon welcomed us to a much needed meal

"Then you didn't get inside?" said he.

"No," responded Mr. Smith, "and I believe that the inside exists only in the imagination of our country folk."

At half past eight our carriage drew up before the house of the Mayor of Pleasant Garden, where we passed the night. While I strove vainly to sleep, I asked myself if I should not stop there in the village and organize a new ascent. But what better chance had it of succeeding than the first? The wisest course was, doubtless, to return to Washington and consult Mr. Ward.

So, the next day, having rewarded our two guides, I took leave of Mr. Smith at Morganton, and that same evening left by train for Washington

CHAPTER IV

A Meeting of the Automobile Club

WAS the mystery of the Great Eyrie to be solved some day by chances beyond our imagining? That was known only to the future. And was the solution a matter of the first importance? That was beyond doubt, since the safety of the people of western Carolina perhaps depended upon it.

Yet a fortnight after my return to Washington, public attention was wholly distracted from this problem by another very different in nature, but equally astonishing.

Toward the middle of that month of May the newspapers of Pennsylvania informed their readers of some strange occurrence in different parts of the state. On the roads which radiated from Philadelphia, the chief city, there circulated an extraordinary vehicle, of which no one could describe the form, or the nature, or even the size, so rapidly did it rush past. It was an automobile; all were agreed on that. But as to what motor drove it, only imagination could say; and when the popular imagination is aroused, what limit is there to its hypotheses?

At that period the most improved automobiles, whether driven by steam, gasoline, or electricity, could not accomplish much more than sixty miles an hour, a speed that the railroads, with their most rapid expresses, scarce exceed on the best lines of America and Europe. Now, this new automobile which was astonishing the world, traveled at more than double this speed.

It is needless to add that such a rate constituted an extreme danger on the highroads, as much so for vehicles, as for pedestrians. This rushing mass, coming like a thunder-bolt, preceded by a formidable rumbling, caused a whirlwind, which tore the branches from the trees along the road, terrified the animals browsing in adjoining fields, and scattered and killed the birds, which could not resist the suction of the tremendous air currents engendered by its passage.

And, a bizarre detail to which the newspapers drew particular attention, the surface of the roads was scarcely even scratched by the wheels of the apparition, which left behind it no such ruts as are usually made by heavy vehicles. At most there was a light touch, a mere brushing of the dust It was only the tremendous speed which raised behind the vehicle such whirlwinds of dust.

"It is probable," commented the *New York Herald*, "that the extreme rapidity of motion destroys the weight."

Naturally there were protests from all sides. It was impossible to permit the mad speed of this apparition which threatened to overthrow and destroy everything in its passage, equipages and people. But how could it be stopped? No one knew to whom the vehicle belonged, nor whence it came, nor whither it went. It was seen but for an instant as it darted forward like a bullet in its dizzy flight. How could one seize a cannon-ball in the air, as it leaped from the mouth of the gun?

I repeat, there was no evidence as to the character of the propelling engine. It left behind it no smoke, no steam, no odor of gasoline, or of any fuel oil. It seemed probable, therefore, that the vehicle ran by electricity, and that its accumulators were of an unknown model, using some unknown fluid.

The public imagination, highly excited, readily accepted every sort of rumor about this mysterious automobile. It was said to be a supernatural car. It was driven by a specter, by one of the chauffeurs of hell, a goblin from another world, a monster escaped from some mythological menagerie, in short, the devil in person, who could defy all human intervention, having at his command invisible and infinite satanic powers.

But even Satan himself had no right to run at such speed over the roads of the United States without a special permit, without a number on his car, and without a regular license. And it was certain that not a single municipality had given him permission to go two hundred miles an hour. Public security demanded that some means be found to unmask the secret of this terrible chauffeur.

Moreover, it was not only Pennsylvania that served as the theater of his sportive eccentricities. The police reported his appearance in other states; in Kentucky near Frankfort; in Ohio near Columbus; in Tennessee near Nashville; in Missouri near Jefferson; and finally in Illinois in the neighborhood of Chicago.

The alarm having been given, it became the duty of the authorities to take steps against this public danger. To arrest or even to halt an apparition moving at such speed was scarcely practicable. A better way would be to erect across the roads solid gateways with which the flying machine must come in contact sooner or later, and be smashed into a thousand pieces

"Nonsense!" declared the incredulous. "This madman would know well how to circle around such obstructions."

"And if necessary," added others, "the machine would leap over the barriers."

"And if he is indeed the devil, he has, as a former angel, presumably preserved his wings, and so he will take to flight."

But this last was but the suggestion of foolish old gossips who did not stop to study the matter For if the King of Hades possessed a pair of wings, why did he obstinately persist in running around on the earth at the risk of crushing his own subjects, when he might more easily have hurled himself through space, as free as a bird

Such was the situation when, in the last week of May, a fresh event occurred, which seemed to show that the United States was indeed helpless in the hands of some unapproachable monster. And after

the New World, would not the Old in its turn, be desecrated by the mad career of this remarkable automobilist?

The following occurrence was reported in all the newspapers of the Union, and with what comments and outcries it is easy to imagine.

A race was to be held by the automobile Club of Wisconsin, over the roads of that state of which Madison is the capital. The route laid out formed an excellent track, about two hundred miles in length, starting from Prairie du Chien on the western frontier, passing by Madison and ending a little above Milwaukee on the shore of Lake Michigan. Except for the Japanese road between Nikko and Namodé, bordered by giant cypresses, there is no better track in the world than this of Wisconsin. It runs straight and level as an arrow for sometimes fifty miles at a stretch. Many and noted were the machines entered for this great race. Every kind of motor vehicle was permitted to compete, even motorcycles, as well as automobiles. The machines were of all makes and nationalities. The sum of the different prizes reached fifty thousand dollars, so that the race was sure to be desperately contested. New records were expected to be made.

Calculating on the maximum speed hitherto attained, of perhaps eighty miles an hour, this international contest covering two hundred miles would last about three hours. And, to avoid all danger, the state authorities of Wisconsin had forbidden all other traffic between Prairie du Chien and Milwaukee during three hours on the morning of the thirtieth of May. Thus, if there were any accidents, those who suffered would be themselves to blame.

There was an enormous crowd; and it was not composed only of the people of Wisconsin. Many thousands gathered from the neighboring states of Illinois, Michigan, Iowa, Indiana, and even from New York. Among the sportsmen assembled were many foreigners, English, French, Germans and Austrians, each nationality, of course, supporting the chauffeurs of its land. Moreover, as this was the United States, the country of the greatest gamblers of the world, bets were made of every sort and of enormous amounts.

The start was to be made at eight o'clock in the morning; and to avoid crowding and the accidents which must result from it, the automobiles were to start at two minute intervals, and race along the roads whose borders were black with spectators.

The first ten racers, numbered by lot, were dispatched between eight o'clock and twenty minutes past. Unless there was some disastrous accident, some of these machines would surely arrive at the goal by eleven o'clock. The others would follow in order.

An hour and a half had passed. There remained but a single contestant at Prairie du Chien. Word was sent back and forth by telephone every five minutes as to the order of the racers. Midway between Madison and Milwaukee, the lead was held by a machine of Renault Brothers, four-cylinder of twenty horsepower, and with Michelin tires. It was closely followed by a Harvard-Watson car and by a de Dion-Bouton. Some accidents had already occurred, other machines were hopelessly behind. Not more than a dozen would contest the finish. Several chauffeurs had been injured, but not seriously. And even had they been killed, the death of men is but a detail, not considered of great importance in that astonishing country of America.

Naturally the excitement became more intense as one approached the finishing line near Milwaukee. There were assembled the most curious, the most interested; and there the passions of the moment were unchained. By ten o'clock it was evident, that the first prize, twenty thousand dollars, lay between five machines, two American, two French, and one English. Imagine, therefore, the fury with which bets were being made under the influence of national pride. The regular book makers could scarcely meet the demands of those who wished to wager. Offers and amounts were hurled from lip to lip with feverish rapidity. "One to three on the Harvard-Watson!"

"One to two on the de Dion-Bouton!"

"Even money on the Renault!"

These cries rang along the line of spectators at each new announcement from the telephones.

Suddenly at half-past nine by the town clock of Prairie du Chien, two miles beyond that town was heard a tremendous noise and rumbling which proceeded from the midst of a flying cloud of dust accompanied by shrieks like those of a naval siren.

Scarcely had the crowds time to draw to one side, to escape a destruction which would have included hundreds of victims. The cloud swept by like a hurricane. No one could distinguish what it was that passed with such speed. There was no exaggeration in saying that its rate was at least one hundred and fifty miles an hour.

The apparition passed and disappeared in an instant, leaving behind it a long train of white dust, as an express locomotive leaves behind a train of smoke. Evidently it was an automobile with a most extraordinary motor. If it maintained this arrow-like speed, it would reach the contestants in the fore-front of the race; it would pass them with this speed double their own; it would arrive first at the goal.

And then from all parts arose an uproar, as soon as the spectators had nothing more to fear.

"It is that infernal machine."

"Yes; the one the police cannot stop."

"But it has not been heard of for a fortnight."

"It was supposed to be done for, destroyed, gone forever."

"It is a devil's car, driven by hellfire, and with Satan driving!"

In truth, if he were not the devil, who could this mysterious chauffeur be, driving, with this unbelievable velocity, his no less mysterious machine? At least it was beyond doubt that this was the same machine which had already attracted so much attention. If the police believed that they had frightened it away, that it was never to be heard of more, well, the police were mistaken—which happens in America as elsewhere.

The first stunned moment of surprise having passed, many people rushed to the telephones to warn those further along the route of the danger which menaced, not only the people, but also the automobiles scattered along the road.

When this terrible madman arrived like an avalanche they would be smashed to pieces, ground into powder, annihilated!

And from the collision might not the destroyer himself emerge safe and sound? He must be s

adroit, this chauffeur of chauffeurs, he must handle his machine with such perfection of eye and hand, that he knew, no doubt, how to escape from every situation. Fortunately the Wisconsin authorities had taken such precautions that the road would be clear except for contesting automobiles. But what right had this machine among them!

And what said the racers themselves, who, warned by telephone, had to sheer aside from the road in their struggle for the grand prize? By their estimate, this amazing vehicle was going at least one hundred and thirty miles an hour. Fast as was their speed, it shot by them at such a rate that they could hardly make out even the shape of the machine, a sort of lengthened spindle, probably not over thirty feet long. Its wheels spun with such velocity that they could scarce be seen. For the rest, the machine left behind it neither smoke nor scent.

As for the driver, hidden in the interior of his machine, he had been quite invisible. He remained as unknown as when he had first appeared on the various roads throughout the country.

Milwaukee was promptly warned of the coming of this interloper. Fancy the excitement the news caused! The immediate purpose agreed upon was to stop this projectile, to erect across its route an obstacle against which it would smash into a thousand pieces. But was there time? Would not the machine appear at any moment? And what need was there, since the track ended on the edge of Lake Michigan, and the vehicle would therefore be forced to stop there anyway, unless its supernatural driver could ride the water as well as the land.

Here, also, as all along the route, the most extravagant suggestions were offered. Even those who would not admit that the mysterious chauffeur must be Satan in person, allowed that he might be some monster escaped from the fantastic visions of the Apocalypse.

And now there were no longer minutes to wait. Any second might bring the expected apparition.

It was not yet eleven o'clock when a rumbling was heard far down the track, and the dust rose in violent whirlwinds. Harsh whistlings shrieked through the air, warning all to give passage to the monster.

It did not slacken speed at the finish. Lake Michigan was not half a mile beyond, and the machine must certainly be hurled into the water! Could it be that the mechanician was no longer master of his mechanism?

There could be little doubt of it. Like a shooting star, the vehicle flashed through Milwaukee. When it had passed the city, would it plunge itself to destruction in the water of Lake Michigan?

At any rate when it disappeared at a slight bend in the road no trace was to be found of its passage.

CHAPTER V

Along the Shores of New England

At the time when the newspapers were filled with these reports, I was again in Washington. On my return I had presented myself at my chief's office, but had been unable to see him Family affairs had suddenly called him away, to be absent some weeks. Mr. Ward, however, undoubtedly knew of the failure of my mission. The newspapers, especially those of North Carolina, had given full details of our ascent of the Great Eyrie.

Naturally, I was much annoyed by this delay which further fretted my restless curiosity. I could turn to no other plans for the future. Could I give up the hope of learning the secret of the Great Eyrie? No! I would return to the attack a dozen times if necessary, and despite every failure.

Surely, the winning of access within those walls was not a task beyond human power. A scaffolding might be raised to the summit of the cliff; or a tunnel might be pierced through its depth. Our engineers met problems more difficult every day. But in this case it was necessary to consider the expense, which might easily grow out of proportion to the advantages to be gained. A tunnel would cost many thousand dollars, and what good would it accomplish beyond satisfying the public curiosity and my own.

My personal resources were wholly insufficient for the achievement. Mr. Ward, who held the government's funds, was away. I even thought of trying to interest some millionaire. Oh, if I could but have promised one of them some gold or silver mines within the mountain! But such an hypothesis was not admissible. The chain of the Appalachians is not situated in a gold bearing region like that of the Pacific mountains, the Transvaal or Australia.

It was not until the fifteenth of June that Mr. Ward returned to duty. Despite my lack of success he received me warmly. "Here is our poor Strock!" cried he, at my entrance. "Our poor Strock, who has failed!"

"No more, Mr. Ward, than if you had charged me to investigate the surface of the moon," answered I. "We found ourselves face to face with purely natural obstacles insurmountable with the forces then at our command."

"I do not doubt that, Strock, I do not doubt that in the least. Nevertheless, the fact remains that you have discovered nothing of what is going on within the Great Eyrie."

"Nothing, Mr. Ward."

"You saw no sign of fire?"

"None."

"And you heard no suspicious noises whatever?"

"None."

"Then it is still uncertain if there is really a volcano there?"

"Still uncertain, Mr. Ward. But if it is there, we have good reason to believe that it has sunk into a profound sleep."

"Still," returned Mr. Ward, "there is nothing to show that it will not wake up again any day, Strock. It is not enough that a volcano should sleep, it must be absolutely extinguished—unless indeed all these threatening rumors have been born solely in the Carolinian imagination."

"That is not possible, sir," I said. "Both Mr. Smith, the mayor of Morganton and his friend the mayor of Pleasant Garden, are reliable men. And they speak from their own knowledge in this matter. Flames have certainly risen above the Great Eyrie. Strange noises have issued from it. There can be no doubt whatever of the reality of these phenomena"

"Granted," declared Mr Ward. "I admit that the evidence is unassailable So the deduction to be drawn is that the Great Eyrie has not yet given up its secret."

"If we are determined to know it, Mr. Ward, the

solution is only a solution of expense. Pickaxes and dynamite would soon conquer those walls."

"No doubt," responded the chief, "but such an undertaking hardly seems justified, since the mountain is now quiet. We will wait awhile and perhaps nature herself will disclose her mystery."

"Mr. Ward, believe me that I regret deeply that I have been unable to solve the problem you entrusted to me," I said.

"Nonsense! Do not upset yourself, Strock. Take your defeat philosophically. We cannot always be successful, even in the police. How many criminals escape us! I believe we should never capture one of them, if they were a little more intelligent and less imprudent, and if they did not compromise themselves so stupidly. Nothing, it seems to me, would be easier than to plan a crime, a theft or an assassination, and to execute it without arousing any suspicions, or leaving any traces to be followed. You understand, Strock, I do not want to give our criminals lessons; I much prefer to have them remain as they are. Nevertheless there are many whom the police will never be able to track down."

On this matter I shared absolutely the opinion of my chief. It is among rascals that one finds the most fools. For this very reason I had been much surprised that none of the authorities had been able to throw any light upon the recent performances of the "demon automobile." And when Mr. Ward brought up this subject, I did not conceal from him my astonishment.

He pointed out that the vehicle was practically unpursuable; that in its earlier appearances, it had apparently vanished from all roads even before a telephone message could be sent ahead. Active and numerous police agents had been spread throughout the country, but no one of them had encountered the delinquent. He did not move continuously from place to place, even at his amazing speed, but seemed to appear only for a moment and then to vanish into thin air. True, he had at length remained visible along the entire route from Prairie du Chien to Milwaukee, and he had covered in less than an hour and a half this track of two hundred miles.

But since then, there had been no news whatever of the machine. Arrived at the end of the route, driven onward by its own impetus, unable to stop, had it indeed been engulfed within the water of Lake Michigan? Must we conclude that the machine and its driver had both perished, that there was no longer any danger to be feared from either? The great majority of the public refused to accept this conclusion. They fully expected the machine to reappear

Mr. Ward frankly admitted that the whole matter seemed to him most extraordinary; and I shared his view. Assuredly if this infernal chauffeur did not return, his apparition would have to be placed among those superhuman mysteries which it is not given to man to understand.

We had fully discussed this affair, the chief and I; and I thought that our interview was at an end, when, after pacing the room for a few moments, he said abruptly, "Yes, what happened there at Milwaukee was very strange. But here is something no less so!"

With this he handed me a report which he had received from Boston, on a subject of which the evening papers had just begun to apprise their readers. While I read it, Mr. Ward was summoned from the room. I seated myself by the window and studied with extreme attention the matter of the report.

For some days the waters along the coast of Maine, Massachusetts and Connecticut had been the scene of an appearance which no one could exactly describe. A moving body would appear amid the waters, some two or three miles off shore, and go through rapid evolutions. It would flash for a while back and forth among the waves and then dart out of sight.

The body moved with such lightning speed that the best telescopes could hardly follow it. Its length did not seem to exceed thirty feet. Its cigar-shaped form and greenish color, made it difficult to distinguish against the background of the ocean. It had been most frequently observed along the coast between Cape Cod and Nova Scotia. From Providence, from Boston, from Portsmouth, and from Portland motor boats and steam launches had repeatedly attempted to approach this moving body and even to give it chase. They could not get anywhere near it.

Pursuit seemed useless. It darted like an arrow beyond the range of view.

Naturally, widely differing opinions were held as to the nature of this object. But no hypothesis rested on any secure basis. Seamen were as much at a loss as others. At first sailors thought it must be some great fish, like a whale. But it is well known that all these animals come to the surface with a certain regularity to breathe, and spout up columns of mingled air and water. Now, this strange animal, if it was an animal, had never "blown" as the whalers say; nor, had it ever made any noises of breathing. Yet if it were not one of these huge marine mammals, how was this unknown monster to be classed? Did it belong among the legendary dwellers in the deep, the krakens, the octopuses, the leviathans, the famous sea-serpents?

At any rate, since this monster, whatever it was, had appeared along the New England shores, the little fishing-smacks and pleasure boats dared not venture forth. Wherever it appeared, the boats fled to the nearest harbor, as was but prudent. If the animal was of a ferocious character, none cared to await its attack.

As to the large ships and coast steamers, they had nothing to fear from any monster, whale or otherwise. Several of them had seen this creature at a distance of some miles. But when they attempted to approach, it fled rapidly away. One day, even a fast United States gun boat went out from Boston, if not to pursue the monster, at least to send after it a few cannon shot. Almost instantly the animal disappeared, and the attempt was vain. As yet, however, the monster had shown no intention of attacking either boats or people.

At this moment Mr. Ward returned and I interrupted my reading to say, "There seems as yet no reason to complain of this sea-serpent. It flees before big ships. It does not pursue little ones. Feeling and intelligence are not very strong in fishes."

"Yet their emotions exist, Strock, and if strongly aroused——"

"But, Mr. Ward, the beast seems not at all dangerous. One of two things will happen. Either it will presently quit these coasts, or finally it will be

captured and we shall be able to study it at our leisure here in the museum of Washington."

"And if it is not a marine animal?" asked Mr. Ward.

"What else can it be?" I protested in surprise.

"Finish your reading," said Mr. Ward.

I did so; and found that in the second part of the report, my chief had underlined some passages in red pencil.

For some time no one had doubted that this was an animal; and that, if it were vigorously pursued, it would at last be driven from our shores. But a change of opinion had come about. People began to ask if, instead of a fish, this were not some new and remarkable kind of boat.

Certainly in that case its engine must be one of amazing power. Perhaps the inventor before selling the secret of his invention, sought to attract public attention and to astound the maritime world. Such surety in the movements of his boat, grace in its every evolution, such ease in defying pursuit by its arrow-like speed, surely, these were enough to arouse world-wide curiosity!

At that time great progress had been made in the manufacture of marine engines. Huge transatlantic steamers completed the ocean passage in five days. And the engineers had not yet spoken their last word, Neither were the navies of the world behindhand. The cruisers, the torpedo boats, the torpedo-destroyers, could match the swiftest steamers of the Atlantic and Pacific, or of the Indian trade.

If, however, this were a boat of some new design, there had as yet been no opportunity to observe its form. As to the engines which drove it, they must be of a power far beyond the most efficient known. By what force they worked, was equally a problem. Since the boat had no sails, it was not driven by the wind; and since it had no smoke-stack, it was not driven by steam.

At this point in the report, I again paused in my reading and considered the comment I wished to make.

"What are you puzzling over, Strock?" demanded my chief.

"It is this, Mr. Ward; the motive power of this so-called boat must be as tremendous and as unknown as that of the remarkable automobile which has so amazed us all"

"So that is your idea, is it, Strock?"

"Yes, Mr. Ward."

There was but one conclusion to be drawn. If the mysterious chauffeur had disappeared, if he had perished with his machine in Lake Michigan, it was equally important now to win the secret of this no less mysterious navigator. And it must be won before he in his turn plunged into the abyss of the ocean. Was it not the interest of the inventor to disclose his invention? Would not the American government or any other give him any price he chose to ask?

Yet unfortunately, since the inventor of the terrestrial apparition had persisted in preserving his incognito, was it not to be feared that the inventor of the marine apparition would equally preserve his? Even if the first machine still existed, it was no longer heard from; and would not the second, in the same way, after having disclosed its powers, disappear in its turn, without a single trace?

What gave weight to this probability was, that, since the arrival of this report at Washington twenty-four hours before, the presence of the extraordinary boat had not been announced from anywhere along the shore. Neither had it been seen on any other coast. Though, of course, the assertion that it would not reappear at all, would have been hazardous, to say the least.

I noted another interesting and possibly important point. It was a singular coincidence which indeed Mr. Ward suggested to me, at the same moment that I was considering it. This was that only after the disappearance of the wonderful automobile had the no less wonderful boat come into view. Moreover, their engines both possessed a most dangerous power of locomotion. If both should go rushing at the same time over the face of the world, the same danger would threaten mankind everywhere, in boats, in vehicles, and on foot. Therefore it was absolutely necessary that the police should in some manner interfere to protect the public ways of travel.

That is what Mr. Ward pointed out to me; and our duty was obvious. But how could we accomplish this task? We discussed the matter for some time; and I was just about to leave when Mr. Ward made one last suggestion.

"Have you not observed, Strock," said he, "that there is a sort of fantastic resemblance between the general appearance of this boat and this automobile?"

"There is something of the sort, Mr. Ward."

"Well, is it not possible that the two are one?"

CHAPTER VI

The First Letter

AFTER leaving Mr. Ward I returned to my home in Long Street. There I had plenty of time to consider this strange case uninterrupted by either wife or children. My household consisted solely of an ancient servant, who having been formerly in the service of my mother, had now continued for fifteen years in mine.

Two months before I had obtained a leave of absence. It had still two weeks to run, unless indeed some unforeseen circumstance interrupted it, some mission which could not be delayed. This leave, as I have shown, had already been interrupted for four days by my exploration of the Great Eyrie.

And now was it not my duty to abandon my vacation, and endeavor to throw light upon the remarkable events of which the road to Milwaukee and the shore of New England had been in turn the scene? I would have given much to solve the twin mysteries, but how was it possible to follow the track of this automobile or this boat?

Seated in my easy chair after breakfast, with my pipe lighted, I opened my newspaper. To what should I turn? Politics interested me but little, with its eternal strife between the Republicans and the Democrats. Neither did I care for the news of society, nor for the sporting page. You will not be surprised, then, that my first idea was to see if there was any news from North Carolina about the Great Eyrie. There was little hope of this, however, for Mr. Smith had promised to telegraph me at once if anything occurred I felt quite sure that the mayor of Morganton was as eager for information and as watchful as I could have been myself The

paper told me nothing new. It dropped idly from my hand, and I remained deep in thought.

What most frequently recurred to me was the suggestion of Mr. Ward that perhaps the automobile and the boat which had attracted our attention were in reality one and the same. Very probably, at least, the two machines had been built by the same hand. And beyond doubt, these were similar engines, which generated this remarkable speed, more than doubling the previous records of earth and sea.

"The same inventor!" repeated I.

Evidently this hypothesis had strong grounds. The fact that the two machines had not yet appeared at the same time added weight to the idea. I murmured to myself, "After the mystery of Great Eyrie, comes that of Milwaukee and Boston. Will this new problem be as difficult to solve as was the other?"

I noted idly that this new affair had a general resemblance to the other, since both menaced the security of the general public. To be sure, only the inhabitants of the Blue Ridge region had been in danger from an eruption or possible earthquake at Great Eyrie. While now, on every road of the United States, or along every league of its coasts and harbors, every inhabitant was in danger from this vehicle or this boat, with its sudden appearance and insane speed.

I found that, as was to be expected, the newspapers not only suggested, but enlarged upon the dangers of the case. Timid people everywhere were much alarmed. My old servant, naturally credulous and superstitious, was particularly upset. That same day after dinner, as she was clearing away the things, she stopped before me, a water bottle in one hand, the napkin in the other, and asked anxiously, "Is there no news, sir?"

"None," I answered, knowing well to what she referred.

"The automobile has not come back?"

"No."

"Nor the boat?"

"Nor the boat. There is no news even in the best informed papers."

"But——your secret police information?"

"We are no wiser."

"Then, sir, if you please, of what use are the police?"

It is a question which has phased me more than once.

"Now you see what will happen," continued the old housekeeper, complainingly, "Some fine morning, he will come without warning, this terrible chauffeur, and rush down our street here and kill us all!"

"Good! When that happens, there will be some chance of catching him."

"He will never be arrested, sir."

"Why not?"

"Because he is the devil himself, and you can't arrest the devil!"

Decidedly, thought I, the devil has many uses; and if he did not exist we would have to invent him, to give people some way of explaining the inexplicable. It was he who lit the flames of the Great Eyrie. It was he who smashed the record in the Wisconsin race. It is he who is scurrying along the shores of Connecticut and Massachusetts. But putting to one side this evil spirit, who is so necessary for the convenience of the ignorant, there was no doubt that we were facing a most bewildering problem. Had both of these machines disappeared forever? They had passed like a meteor, like a star shooting through space, and in a hundred years the adventure would become a legend, much to the taste of the gossips of the next century.

For several days the newspapers of America and even those of Europe continued to discuss these events. Editorials crowded upon editorials. Rumors were added to rumors. Story tellers of every kind crowded to the front. The public of two continents was interested. In some parts of Europe there was even jealousy that America should have been chosen as the field of such an experience. If these marvelous inventors were American, then their country, their army and navy, would have a great advantage over others. The United States might acquire an incontestible superiority.

Under the date of the tenth of June, a New York paper published a carefully studied article on this phase of the subject. Comparing the speed of the swiftest known vessels with the smallest minimum of speed which could possibly be assigned to the new boat, the article demonstrated that if the United States secured this secret, Europe would be but three days away from her, while she would still be five days from Europe.

If our own police had searched diligently to discover the mystery of the Great Eyrie, the secret service of every country in the world was now interested in these new problems.

Mr. Ward referred to the matter each time I saw him. Our chat would begin by his rallying me about my ill-success in Carolina, and I would respond by reminding him that success there was only a question of expense.

"Never mind, my good Strock," said he, "there will come a chance for our clever inspector to regain his laurels. Take now this affair of the automobile and the boat. If you could clear that up in advance of all the detectives of the world, what an honor it would be to our department! What glory for you!"

"It certainly would, Mr. Ward. And if you put the matter in my charge—"

"Who knows, Strock? Let us wait awhile! Let us wait!"

Matters stood thus when, on the morning of June fifteenth, my old servant brought me a letter from the letter-carrier, a registered letter for which I had to sign. I looked at the address. I did not know the handwriting. The postmark, dating from two days before, was stamped at the post-office of Morganton.

Morganton! Here at last was, no doubt, news from Mr. Elias Smith.

"Yes!" exclaimed I, speaking to my old servant, for lack of another, "it must be from Mr. Smith at last. I know no one else in Morganton. And if he writes he has news!"

"Morganton?" said the old woman, "isn't that the place where the demons set fire to their mountain?"

"Exactly."

"Oh, sir! I hope you don't mean to go back there!"

"Why not?"

"Because you will end by being burned up in that furnace of the Great Eyrie. And I wouldn't want you buried that way, sir."

"Cheer up, and let us see if it is not better news than that."

The envelope was sealed with red sealing wax, and stamped with a sort of coat-of-arms, surmounted with three stars. The paper was thick and very strong. I broke the envelope and drew out a letter It was a single sheet, folded in four, and written on one side only. My first glance was for the signature.

There was no signature! Nothing but three initials at the end of the last line!

"The letter is not from the Mayor of Morganton," said I.

"Then from whom?" asked the old servant, doubly curious in her quality as a woman and as an old gossip.

Looking again at the three initials of the signature, I said, "I know no one for whom these letters would stand; neither at Morganton nor elsewhere."

The handwriting was bold. Both up strokes and down strokes very sharp, about twenty lines in all. Here is the letter, of which I, with good reason, retained an exact copy. It was dated, to my extreme stupefaction, from that mysterious Great Eyrie:

"Great Eyrie, Blue Ridge Mtns,
North Carolina, June 13th.

"To Mr. Strock:
Chief Inspector of Police,
34 Long St., Washington, D. C.

"Sir,

"You were charged with the mission of penetrating the Great Eyrie.

"You came on April the twenty-eighth, accompanied by the Mayor of Morganton and two guides.

"You mounted to the foot of the wall, and you encircled it, finding it too high and steep to climb.

"You sought a breech and you found none.

"Know this: none enter the Great Eyrie; or if one enters, he never returns.

"Do not try again, for the second attempt will not result as did the first, but will have grave consequences for you.

"Heed this warning, or evil fortune will come to you. "M. o. W."

CHAPTER VII

A Third Machine

I CONFESS that at first this letter dumbfounded me "Oh!" and "Ah!" slipped from my open mouth. The old servant stared at me, not knowing what to think.

"Oh, sir! is it bad news?"

I answered—for I kept few secrets from this faithful soul—by reading her the letter from end to end. She listened with much anxiety.

"A joke, without doubt," said I, shrugging my shoulders

"Well," returned my superstitious handmaid, "if it isn't from the devil, it's from the devil's country, anyway."

Left alone, I again went over this unexpected letter. Reflection inclined me yet more strongly to believe that it was the work of a practical joker. My adventure was well known. The newspapers had given it in full detail. Some satirist, such as exists even in America, must have written this threatening letter to mock me.

To assume, on the other hand, that the Eyrie really served as the refuge of a band of criminals, seemed absurd. If they feared that the police would discover their retreat, surely they would not have been so foolish as thus to force attention upon themselves. Their chief security would lie in keeping their presence there unknown. They must have realized that such a challenge from them would only arouse the police to renewed activity. Dynamite or melinite would soon open an entrance to their fortress. Moreover, how could these men have, themselves, gained entrance into the Eyrie—unless there existed a passage which we had failed to discover? Assuredly the letter came from a jester or a madman; and I need not worry over it, nor even consider it.

Hence, though for an instant I had thought of showing this letter to Mr. Ward, I decided not to do so. Surely he would attach no importance to it. However, I did not destroy it, but locked it in my desk for safekeeping. If more letters came of the same kind, and with the same initials, I would attach as little weight to them as to this.

Several days passed quietly. There was nothing to lead me to expect that I would soon quit Washington; though in my line of duty one is never certain of the morrow. At any moment I might be speeding from Oregon to Florida, from Maine to Texas. And—this unpleasant thought haunted me frequently—if my next mission were no more successful than that to the Great Eyrie, I might as well give up and hand in my resignation from the force. Of the mysterious chauffeur or chauffeurs, nothing more was heard. I knew that our own government agents, as well as foreign ones, were keeping keen watch over all the roads and rivers, all the lakes and the coasts of America. Of course, the size of the country made any close supervision impossible; but these twin inventors had not before chosen secluded and unfrequented spots in which to appear. The main highway of Wisconsin on a great race day, the harbor of Boston, incessantly crossed by thousands of boats, these were hardly what would be called hiding places! If the daring driver had not perished—of which there was always strong probability; then he must have left America. Perhaps he was in the waters of the Old World, or else resting in some retreat known only to himself, and in that case—

"Ah!" I repeated to myself, many times, "for such a retreat, as secret as inaccessible, this fantastic personage could not find one better than the Great Eyrie!" But, of course, a boat could not get there, any more than an automobile. Only high-flying birds of prey, eagles or condors, could find refuge there.

The nineteenth of June I was going to the police bureau, when, on leaving my house, I noticed two men who looked at me with a certain keenness. Not knowing them, I took no notice; and if my attention was drawn to the matter, it was because my servant spoke of it when I returned

For some days, she said, she had noticed that two men seemed to be spying upon me in the street. They stood constantly, perhaps a hundred steps from my house; and she suspected that they followed me each time I went up the street.

"You are sure?" I asked.

"Yes, sir, and no longer ago than yesterday, when you came into the house, these men came slipping along in your footsteps, and then went away as soon as the door was shut behind you."

"You must be mistaken?"

"But I tell you I am not mistaken, sir."

"And if you met these two men, you would know them?"

"I would."

"Good," I cried, laughing, "I see you have the very spirit of a detective. I must engage you as a member of our force."

"Joke if you like, sir. But I have still two good eyes, and I don't need spectacles to recognize people. Someone is spying on you, that's certain; and you should put some of your men to track them, in turn."

"All right; I promise to do so," I said, to satisfy her. "And when my men get after them, we shall soon know what these mysterious fellows want of me."

In truth, I did not take the good soul's excited announcement very seriously. I added, however, "When I go out, I will watch the people around me with great care."

"That will be best, sir."

My poor old housekeeper was always frightening herself at nothing. "If I see them again," she added, "I will warn you before you set foot out of doors."

"Agreed!" And I broke off the conversation, knowing well that if I allowed her to run on, she would end by being sure that Beelzebub himself and one of his chief attendants were at my heels.

The two following days, there was certainly no one spying on me, either at my exits or entrances. So I concluded that my old servant had made much of nothing, as usual. But on the morning of the twenty-second of June, after rushing upstairs as rapidly as her age would permit, the devoted old soul burst into my room and in a half whisper gasped, "Sir! Sir!"

"What is it?"

"They are there!"

"Who?" I queried, my mind on anything but the web she had been spinning about me.

"The two spies!"

"Ah, those wonderful spies!"

"Themselves!—In the street!—Right in front of our windows!—Watching the house, waiting for you to go out."

I went to the window and raising just an edge of the shade, so as not to give any warning, I saw two men on the pavement.

They were rather fine-looking men, broad-shouldered and vigorous, aged somewhat under forty, dressed in the ordinary fashion of the day, with slouched hats, heavy woolen suits, stout walking shoes and sticks in hand. Undoubtedly, they were staring persistently at my apparently unwatchful house. Then, having exchanged a few words, they strolled off a little way, and returned again.

"Are you sure these are the same men you saw before?"

"Yes, sir."

Evidently, I could no longer dismiss her warning as an hallucination; and I promised myself to clear up the matter. As to following the men myself, I was presumably too well known to them. To address them directly would probably be of no use. But that very day, one of our best men should be put on watch, and if the spies returned on the morrow, they should be tracked in their turn, and watched until their identity was established.

At the moment, they were waiting to follow me to police headquarters. For it was there that I was bound, as usual. If they accompanied me I might be able to offer them a hospitality for which they would scarce thank me.

I took my hat; and while the housekeeper remained peeping from the window, I went downstairs, opened the door, and stepped into the street.

The two men were no longer there.

Despite all my watchfulness, that day I saw no more of them as I passed along the streets. From that time on, indeed, neither my old servant nor I saw them again before the house, nor did I encounter them elsewhere. Their appearance, however, was stamped upon my memory, I would not forget them.

Perhaps, after all, admitting that I had been the object of their espionage, they had been mistaken in my identity. Having obtained a good look at me, they now followed me no more. So in the end, I came to regard this matter as of no more importance than the letter with the initials M. o. W.

Then, on the twenty-fourth of June, there came a new event, to further stimulate both my interest and that of the general public in the previous mysteries of the automobile and the boat. The Washington *Evening Star* published the following account, which was next morning copied by every paper in the country.

"Lake Kirdall in Kansas, forty miles west of Topeka, is little known. It deserves wider knowledge, and doubtless will have it hereafter, for attention is now drawn to it in a very remarkable way.

"This lake, deep among the mountains, appears to have no outlet. What it loses in evaporation, it regains from the little neighboring streamlets and the heavy rains.

"Lake Kirdall covers about seventy-five square miles, and its level is but slightly below that of the heights which surround it. Shut in among the mountains, it can be reached only by narrow and rocky gorges. Several villages, however, have sprung up upon its banks. It is full of fish, and fishing-boats cover its waters.

"Lake Kirdall is in many places fifty feet deep close to shore. Sharp, pointed rocks form the edges of this huge basin. Its surges, roused by high winds, beat upon its banks with fury, and the houses near at hand are often deluged with spray as if with the downpour of a hurricane. The lake, already deep at the edge, becomes yet deeper toward the center, where in some places soundings show over three hundred feet of water.

"The fishing industry supports a population of several thousands, and there are several hundred fishing boats in addition to the dozen or so of little steamers which serve the traffic of the lake. Beyond the circle of the mountains lie the railroads which transport the products of the fishing industry throughout Kansas and the neighboring states.

"This account of Lake Kirdall is necessary for the understanding of the remarkable facts which we are about to report."

And this is what the *Evening Star* then reported in its startling article. "For some time past, the fishermen have noticed a strange upheaval in the waters of the lake. Sometimes it rises as if a wave surged up from its depths. Even in perfectly calm weather, when there is no wind whatever, this upheaval sometimes arises in a mass of foam.

Tossed about by violent waves of unaccountable currents, boats have been swept beyond all control.

Sometimes they have been dashed one against another, and serious damage has resulted.

"This confusion of the waters evidently has its origin somewhere in the depths of the lake; and various explanations have been offered to account for it. At first, it was suggested that the trouble was due to seismic forces, to some volcanic action beneath the lake; but this hypothesis had to be rejected when it was recognized that the disturbance was not confined to one locality, but spread itself over the entire surface of the lake, either at one part or another, in the center or along the edges, traveling along almost in a regular line and in a way to exclude entirely all idea of earthquake or volcanic action.

"Another hypothesis suggested that it was a marine monster who thus upheaved the waters. But unless the beast had been born in the lake and had there grown to its gigantic proportions unsuspected, which was scarcely possible, he must have come there from outside. Lake Kirdall, however, has no connection with any other waters. If this lake were situated near any of the oceans, there might be subterranean canals; but in the center of America, and at the height of some thousands of feet above sea-level, this is not possible. In short, here is another riddle not easy to solve, and it is much easier to point out the impossibility of false explanations, than to discover the true ones.

"Is it possible that the submarine boat is being experimented with beneath the lake? Such boats are no longer impossible today. Some years ago, at Bridgeport, Connecticut, there was launched a boat, *The Protector,* which could go on the water, under the water, and also upon land. Built by an inventor named Lake, supplied with two motors, an electric one of seventy-five horsepower, and a gasoline one of two hundred and fifty horsepower, it was also provided with wheels a yard in diameter, which enabled it to roll over the roads, as well as swim the seas.

"But even then, granting that the turmoil of Lake Kirdall might be produced by a submarine, brought to a high degree of perfection, there remains as before the question how could it have reached Lake Kirdall? The lake, shut in on all sides by a circle of mountains, is no more accessible to a submarine than to a sea-monster.

"In whatever way this last puzzling question may be solved, the nature of this strange appearance can no longer be disputed since the twentieth of June. On that day, in the afternoon, the schooner *Markel,* while speeding with all sails set, came into violent collision with something just below the water level. There was no shoal nor rock near; for the lake in this part is eighty or ninety feet deep. The schooner with both her bow and her side badly broken, was in great danger of sinking. She managed, however, to reach the shore before her decks were completely submerged.

"When the *Markel* had been pumped out and hauled up on shore, an examination showed that she had received a blow near the bow, as if from a powerful ram.

"From this it seems evident that there is actually a submarine boat which darts about beneath the surface of Lake Kirdall with most remarkable rapidity.

"The thing is difficult to explain. Not only is there a question as to how did the submarine get there? But why is it there? Why does it never come to the surface? What reason has its owner for remaining unknown? Are other disasters to be expected from its reckless course?"

The article in the *Evening Star* closed with this truly striking suggestion: "After the mysterious automobile, came the mysterious boat. Now comes the mysterious submarine.

"Must we conclude that the three engines are due to the genius of the same inventor, and that the three vehicles are in truth but one?"

CHAPTER VIII

At Any Cost

THE suggestion of the *Star* came like a revelation. It was accepted everywhere. Not only were these three vehicles the work of the same inventor; they were the same machine!

It was not easy to see how the remarkable transformation could be practically accomplished from one means of locomotion to the other. How could an automobile become a boat, and yet more, a submarine? All the machine seemed to lack was the power of flying through the air. Nevertheless, everything that was known of the three different machines, as to their size, their shape, their lack of odor or of steam, and above all, their remarkable speed, seemed to imply their identity. The public, grown blasé with so many excitements, found in this new marvel a stimulus to reawaken their curiosity.

The newspapers dwelt now chiefly on the importance of the invention. This new engine, whether in one vehicle or three, had given proofs of its power. What amazing proofs! The invention must be bought at any-price. The United States government must purchase it at once for the use of the nation. Assuredly, the great European powers would stop at nothing to be beforehand with America, and gain possession of an engine so invaluable for military and naval use. What incalculable advantages would it give to any nation, both on land and sea! Its destructive powers could not even be estimated, until its qualities and limitations were better known. No amount of money would be too great to pay for the secret; America could not put her millions to better use.

But to buy the machine, it was necessary to find the inventor; and there the chief difficulty seemed to be. In vain was Lake Kirdall searched from end to end. Even its depths were explored with a sounding-line without results. Must it be concluded that the submarine no longer lurked beneath its waters? But in that case, how had the boat gotten away? For that matter, how had it come? An insoluble problem!

The submarine was heard from no more, neither in Lake Kirdall nor elsewhere. It had disappeared like the automobile from the roads, and like the boat from the shores of America. Several times in my interviews with Mr. Ward, we discussed this matter, which still filled his mind. Our men continued everywhere on the lookout, but as unsuccessfully as other agents.

On the morning of the twenty-seventh of June, I was summoned into the presence of Mr. Ward.

"Well, Strock," said he, "here is a splendid chance for you to get your revenge."

"Revenge for the Great Eyrie disappointment?"

"Of course."

"What chance?" asked I, not knowing if he spoke seriously, or in jest.

"Why, here," he answered. "Would not you like to discover the inventor of this three-fold machine?"

"I certainly should, Mr Ward. Give me the order to take charge of the matter, and I will accomplish the impossible, in order to succeed. It is true, I believe it will be difficult."

"Undoubtedly, Strock. Perhaps even more difficult than to penetrate into the Great Eyrie."

It was evident that Mr. Ward was intent on rallying me about my unsuccess. He would not do that, I felt assured, out of mere unkindness. Perhaps then he meant to rouse my resolution. He knew me well; and realized that I would have given anything in the world to recoup my defeat. I waited quietly for new instructions.

Mr. Ward dropped his jesting and said to me very generously, "I know, Strock, that you accomplished everything that depended on human powers; and that no blame attaches to you. But we face now a matter very different from that of the Great Eyrie. The day the government decides to force that secret, everything is ready. We have only to spend some thousands of dollars, and the road will be open."

"That is what I would urge."

"But at present," said Mr Ward, shaking his head, "it is much more important to place our hands on this fantastic inventor, who so constantly escapes us. That is work for a detective, indeed; a master detective!"

"He has not been heard from again?"

"No; and though there is every reason to believe that he has been, and still continues, beneath the waters of Lake Kirdall, it has been impossible to find any trace of him anywhere around there. One would almost fancy he had the power of making himself invisible, this Proteus of a mechanic!"

"It seems likely," said I, "that he will never be seen until he wishes to be."

"True, Strock. And to my mind there is only one way of dealing with him, and that is to offer him such an enormous price that he cannot refuse to sell his invention.

Mr. Ward was right. Indeed, the government had already made the effort to secure speech with this hero of the day, and surely no human being has ever better merited the title. The press had widely spread the news, and this extraordinary individual must assuredly know what the government desired of him, and how completely he could name the terms he wished.

"Surely," added Mr. Ward, "this invention can be of no personal use to the man, that he should hide it from the rest of us. There is every reason why he should sell it. Can this unknown be already some dangerous criminal who, thanks to his machine, hopes to defy all pursuit?"

My chief then went on to explain that it had been decided to employ other means in search of the inventor. It was possible, after all, that he had perished with his machine in some dangerous maneuver. If so, the ruined vehicle might prove almost as valuable and instructive to the mechanical world as the man himself. But since the accident to the schooner *Markel* on Lake Kirdall, no news of him whatever had reached the police.

On this point, Mr. Ward did not attempt to hide his disappointment and his anxiety. Anxiety, yes, for it was manifestly becoming more and more difficult for him to fulfill his duty of protecting the public. How could we arrest criminals, if they could flee from justice at such speed over both land and sea? How could we pursue them under the oceans? And when dirigible balloons should also have reached their full perfection, we would even have to chase men through the air! I asked myself if my colleagues and I would not find ourselves some day reduced to utter helplessness? if police officials, become a useless incumbrance, would be definitely discarded by society?

Here, there recurred to me the jesting letter I had received a fortnight before, the letter which threatened my liberty and even my life. I recalled, also, the singular espionage of which I had been the subject. I asked myself if I had better mention these things to Mr. Ward. But they seemed to have absolutely no relation to the matter now in hand. The Great Eyrie affair had been definitely put aside by the government, since an eruption was no longer threatening. And they now wished to employ me upon this newer matter. I waited, then, to mention this letter to my chief at some future time, when it would be not so sore a joke to me.

Mr. Ward again took up our conversation. "We are resolved by some means to establish communication with this inventor. He has disappeared, it is true; but he may reappear at any moment, and in any part of the country. I have chosen you, Strock, to follow him the instant he appears. You must hold yourself ready to leave Washington on the moment. Do not quit your house, except to come here to headquarters each day; notify me, each time by telephone, when you start from home, and report to me personally the moment you arrive here."

"I will follow orders exactly, Mr. Ward," I answered. "But permit me one question. Ought I to act alone, or will it not be better to join with me—?"

"That is what I intend," said the chief, interrupting me. "You are to choose two of our men whom you think the best fitted."

"I will do so, Mr. Ward. And now, if some day or other I stand in the presence of our man, what am I to do with him?"

"Above all things, do not lose sight of him. If there is no other way, arrest him. You shall have a warrant."

"A useful precaution, Mr. Ward. If he started to jump into his automobile and to speed away at the rate we know of, I must stop him at any cost. One cannot argue long with a man making two hundred miles an hour!"

"You must prevent that, Strock. And the arrest made, telegraph me. After that, the matter will be in my hands."

"Count on me, Mr. Ward; at any hour, day or night, I shall be ready to start with my men. I thank you for having entrusted this mission to me. If it succeeds, it will be a great honor—"

"And of great profit," added my chief, dismissing me.

Returning home, I made all preparations for a trip of indefinite duration. Perhaps my good housekeeper imagined that I planned a return to the Great Eyrie, which she regarded as an ante-chamber of hell itself She said nothing, but went about her work with a most despairing face. Nevertheless.

sure as I was of her discretion, I told her nothing. In this great mission I would confide in no one.

My choice of the two men to accompany me was easily made. They both belonged to my own department, and had many times under my direct command given proofs of their vigor, courage and intelligence. One, John Hart, of Illinois, was a man of thirty years; the other, aged thirty-two, was Nab Walker, of Massachusetts. I could not have had better assistants.

Several days passed, without news, either of the automobile, the boat, or the submarine. There were rumors in plenty; but the police knew them to be false. As to the reckless stories that appeared in the newspapers, they had most of them, no foundation whatever. Even the best journals cannot be trusted to refuse an exciting bit of news on the mere ground of its unreliability.

Then, twice in quick succession, there came what seemed trustworthy reports of the "man of the hour." The first asserted that he had been seen on the roads of Arkansas, near Little Rock. The second, that he was in the very middle of Lake Superior.

Unfortunately, these two notices were absolutely unreconcilable; for while the first gave the afternoon of June twenty-sixth, as the time of appearance, the second set it for the evening of the same day. Now, these two points of the United States territory are not less than eight hundred miles apart. Even granting the automobile this unthinkable speed, greater than any it had yet shown, how could it have crossed all the intervening country unseen? How could it traverse the States of Arkansas, Missouri, Iowa and Wisconsin, from end to end, without any one of our agents giving us warning, without any interested person rushing to a telephone.

After these two momentary appearances, if appearances they were, the machine again dropped out of knowledge. Mr. Ward did not think it worth while to dispatch me and my men to either point whence it had been reported.

Yet since this marvelous machine seemed still in existence, something must be done. The following official notice was published in every newspaper of the United States, under July 3d. It was couched in the most formal terms:

"During the month of April, of the present year, an automobile traversed the roads of Pennsylvania, of Kentucky, of Ohio, of Tennessee, of Missouri, of Illinois; and, on the twenty-seventh of May, during the race held by the American Automobile Club, it covered the course in Wisconsin. Then it disappeared.

"During the first week of June, a boat maneuvering at great speed appeared off the coast of New England between Cape Cod and Cape Sable, and more particularly around Boston. Then it disappeared.

"In the second fortnight of the same month, a submarine boat was run beneath the waters of Lake Kirdall, in Kansas. Then it disappeared.

"Everything points to the belief that the same inventor must have built these three machines, or perhaps that they are the same machine, constructed so as to travel both on land and water.

"A proposition is therefore addressed to the said inventor, whoever he be, with the aim of acquiring the said machine

"He is requested to make himself known and to name the terms upon which he will treat with the United States government. He is also requested to answer as promptly as possible to the Department of Federal Police, Washington, D. C., United States of America."

Such was the notice printed in large type on the front page of every newspaper. Surely it could not fail to reach the eye of him for whom it was intended, wherever he might be. He would read it. He could scarce fail to answer it in some manner. And why should he refuse such an unlimited offer? We had only to await his reply.

One can easily imagine how high the public curiosity rose. From morning till night, an eager and noisy crowd pressed about the bureau of police, awaiting the arrival of a letter or a telegram. The best reporters were on the spot. What honor, what profit would come to the paper which was first to publish the famous news! To know at last the name and place of the undiscoverable unknown! And to know if he would agree to some bargain with the government! It goes without saying that America does things on a magnificent scale. Millions would not be lacking for the inventor. If necessary, all the millionaires in the country would open their inexhaustible purses!

The day passed. To how many excited and impatient people it seemed to contain more than twenty-four hours! And each hour held far more than sixty minutes! There came no answer, no letter, no telegram! The night following, there was still no news. And it was the same the next day—and the next.

There came, however, another result, which had been fully foreseen. The cables informed Europe of what the United States government had done. The different Powers of the Old World hoped also to obtain possession of the wonderful invention. Why should they not struggle for an advantage so tremendous? Why should they not enter the contest with their millions?

In brief, every great power took part in the affair, France, England, Russia, Italy, Austria, Germany. Only the states of the second order refrained from entering with their smaller resources, upon a useless effort. The European press published notices identical with that of the United States. The extraordinary "chauffeur" had only to speak, to become a rival to the Vanderbilts, the Astors, the Goulds, the Morgans, and the Rothschilds of every country of Europe.

And, when the mysterious inventor made no sign, what attractive offers were held forth to tempt him to discard the secrecy in which he was enwrapped! The whole world became a public market, an auction house whence arose the most amazing bids. Twice a day the newspapers would add up the amounts, and these kept rising from millions to millions. The end came when the United States Congress, after a memorable session, voted to offer the sum of twenty million dollars. And there was not a citizen of the States of whatever rank, who objected to the amount, so much importance was attached to the possession of this prodigious engine of locomotion. As for me, I said emphatically to my old housekeeper "The machine is worth even more than that."

Evidently the other nations of the world did not think so, for their bids remained below the final sum. But how useless was this mighty struggle of the

great rivals! The inventor did not appear! He did not exist! He had never existed! It was all a monstrous pretense of the American newspapers. That, at least, became the announced view of the Old World.

And so the time passed. There was no further news of our man, there was no response from him. He appeared no more. For my part, not knowing what to think, I commenced to lose all hope of reaching any solution to the strange affair.

Then on the morning of the fifteenth of July, a letter without postmark was found in the mailbox of the police bureau. After the authorities had studied it, it was given out to the Washington journals, which published it in facsimile, in special numbers. It was couched as follows:

CHAPTER IX

The Second Letter

"On Board the 'Terror'
"July 15.

"TO the Old and New World:

"The propositions emanating from the different governments of Europe, as also that which has finally been made by the United States of America, need expect no other answer than this:

"I refuse absolutely and definitely the sums offered for my invention.

"My machine will be neither French nor German, nor Austrian nor Russian, nor English nor American.

"The invention will remain my own, and I shall use it as pleases me.

"With it, I hold control of the entire world, and there lies no force within the reach of humanity which is able to resist me, under any circumstances whatsoever.

"Let no one attempt to seize or stop me. It is, and will be, utterly impossible. Whatever injury anyone attempts against me, I will return a hundredfold.

"As to the money which is offered me, I despise it! I have no need of it. Moreover, on the day when it pleases me to have millions, or billions, I have but to reach out my hand and take them.

"Let both the Old and the New World realize this: They can accomplish nothing against me; I can accomplish anything against them.

"So I sign this letter:

"The Master of the World."

CHAPTER X

Outside the Law

SUCH was the letter addressed to the government of the United States. As to the person who had placed it in the police mailbox, no one had seen him.

The sidewalk in front of our offices had probably not been once vacant during the entire night. From sunset to sunrise, there had always been people busy, anxious, or curious, passing before our door. It is true, however, that even then, the bearer of the letter might easily have slipped by unseen and dropped the letter in the box The night had been so dark, you could scarcely see from one side of the street to the other.

I have said that this letter appeared in facsimile in all the newspapers to which the government communicated it. Perhaps one would naturally imagine that the first comment of the public would be, "This is the work of some practical joker." It was in that way that I had accepted my letter from the Great Eyrie, five weeks before.

But this was not the general attitude toward the present letter, neither in Washington, nor in the rest of America. To the few who would have maintained that the document should not be taken seriously, an immense majority would have responded: "This letter has not the style nor the spirit of a jester. Only one man could have written it; and that is the inventor of this unapproachable machine."

To most people this conclusion seemed indisputable, owing to a curious state of mind easily explainable. For all the strange facts of which the key had hitherto been lacking, this letter furnished an explanation. The theory now almost universally accepted was as follows: The inventor had hidden himself for a time, only in order to reappear more startlingly in some new light. Instead of having perished in an accident, he had concealed himself in some retreat where the police were unable to discover him. Then to assert positively his attitude toward all governments he had written this letter. But instead of dropping it in the post in any one locality, which might have resulted in its being traced to him, he had come to Washington and deposited it himself in the very spot suggested by the government's official notice, the Bureau of Police.

Well! If this remarkable personage had reckoned that this new proof of his existence would make some noise in two worlds, he certainly figured rightly. That day, the millions of good folk who read and re-read their daily paper could—to employ a well-known phrase—scarcely believe their eyes.

As for myself, I studied carefully every phase of the defiant document. The handwriting was black and heavy. An expert at chirography would doubtless have distinguished in the lines traces of a violent temperament, of a character stern and unsocial. Suddenly, a cry escaped me—a cry that fortunately my housekeeper did not hear. Why had I not noticed sooner the resemblance of the handwriting to that of the letter I had received from Morganton?

Moreover, a yet more significant coincidence, the initials with which my letter had been signed, did they not stand for the words "Master of the World?"

And whence came the second letter? "On Board the 'Terror.'" Doubtless this name was that of the triple machine commanded by the mysterious captain. The initials in my letter were his own signature; and it was he who had threatened me, if I dared to renew my attempt on the Great Eyrie.

I rose and took from my desk the letter of June thirteenth. I compared it with the facsimile in the newspapers. There was no doubt about it. They were both in the same peculiar handwriting.

My mind worked eagerly. I sought to trace the probable deductions from this striking fact, known only to myself. The man who had threatened me was the commander of this "Terror"—startling name, only too well justified! I asked myself if our search could not now be prosecuted under less vague conditions Could we not now start our men upon a trail which would lead definitely to success? In short,

what relation existed between the "Terror" and the Great Eyrie? What connection was there between the phenomena of the Blue Ridge Mountains, and the no less phenomenal performances of the fantastic machine.

I knew what my first step would be; and with the letter in my pocket, I hastened to police headquarters. Inquiring if Mr. Ward was within and receiving an affirmative reply, I hastened toward his door, and rapped upon it with unusual and perhaps unnecessary vigor. Upon his call to enter, I stepped eagerly into the room.

The chief had spread before him the letter published in the papers, not a facsimile, but the original itself which had been deposited in the letter-box of the department.

"You come as if you had important news, Strock?"

"Judge for yourself, Mr. Ward," and I drew from my pocket the letter with the initials.

Mr. Ward took it, glanced at its face, and asked, "What is this?"

"A letter signed only with initials, as you can see."

"And where was it posted?"

"In Morganton, in North Carolina."

"When did you receive it?"

"A month ago, the thirteenth of June."

"What did you think of it then?"

"That it had been written as a joke."

"And—now—Strock?"

"I think, what you will think, Mr. Ward, after you have studied it."

My chief turned to the letter again and read it carefully. "It is signed with three initials," said he.

"Yes, Mr. Ward, and those initials belong to the words, 'Master of the World,' in this facsimile."

"Of which this is the original," responded Mr. Ward, taking it up.

"It is quite evident," I urged, "that the two letters are by the same hand."

"It seems so."

"You see what threats are made against me, to protect the Great Eyrie."

"Yes, the threat of death! But Strock, you have had this letter for a month. Why have you not shown it to me before?"

"Because I attached no importance to it. Today, after the letter from the 'Terror,' it must be taken seriously."

"I agree with you. It appears to me most important. I even hope it may prove the means of tracking this strange personage."

"That is what I also hope, Mr. Ward."

"Only—what connection can possibly exist between the 'Terror' and the Great Eyrie?"

"That I do not know. I cannot even imagine—"

"There can be but one explanation," continued Mr. Ward, "though it is almost inadmissible, even impossible.

"And that is?"

"That the Great Eyrie was the spot selected by the inventor, where he gathered his material."

"That is impossible!" cried I. "In what way would he get his material in there? And how get his machine out? After what I have seen, Mr. Ward, your suggestion is impossible."

"Unless, Strock—"

"Unless what?" I demanded.

"Unless the machine of this Master of the World has also wings, which permit it to take refuge in the Great Eyrie."

At the suggestion that the "Terror," which had searched the deeps of the sea, might be capable also of rivaling the vultures and the eagles, I could not restrain an expressive shrug of incredulity. Neither did Mr. Ward himself dwell upon the extravagant hypothesis.

He took the two letters and compared them afresh. He examined them under a microscope, especially the signatures, and established their perfect identity. Not only the same hand, but the same pen had written them.

After some moments of further reflection, Mr. Ward said, "I will keep your letter, Strock. Decidedly, I think, that you are fated to play an important part in this strange affair—or rather in these two affairs. What thread attaches them, I cannot yet see; but I am sure the thread exists. You have been connected with the first, and it will not be surprising if you have a large part in the second."

"I hope so, Mr. Ward. You know how inquisitive I am."

"I do, Strock. That is understood. Now, I can only repeat my former order; hold yourself in readiness to leave Washington at a moment's warning."

All that day, the public excitement caused by the defiant letter mounted steadily higher. It was felt, both at the White House and at the Capitol, that public opinion absolutely demanded some action. Of course, it was difficult to do anything. Where could one find this Master of the World? And even if he were discovered, how could he be captured? He had at his disposal not only the powers he had displayed, but apparently still greater resources as yet unknown. How had he been able to reach Lake Kirdall over the rocks; and how had he escaped from it? Then, if he had indeed appeared on Lake Superior, how had he covered all the intervening territory unseen?

What a bewildering affair it was altogether! This, of course, made it all the more important to get to the bottom of it. Since the millions of dollars had been refused, force must be employed. The inventor and his invention were not to be bought. And in what haughty and menacing terms he had couched his refusal! So be it! He must be treated as an enemy of society, against whom all means became justified, that he might be deprived of his power to injure others. The idea that he had perished was now entirely discarded. He was alive, very much alive; and his existence constituted a perpetual public danger!

Influenced by these ideas, the government issued the following proclamation:

"Since the commander of the 'Terror' has refused to make public his invention, at any price whatever, since the use which he makes of his machine constitutes a public menace, against which it is impossible to guard, the said commander of the 'Terror' is hereby placed beyond the protection of the law. Any measures taken in the effort to capture or destroy either him or his machine will be approved and rewarded."

It was a declaration of war, war to the death against this "Master of the World" who thought to threaten and defy an entire nation, the American nation!

Before the day was over, various rewards of large amounts were promised to anyone who revealed the

hiding place of this dangerous inventor, to anyone who could identify him, and to anyone who should rid the country of him.

Such was the situation during the last fortnight of July. All was left to the hazard of fortune. The moment the outlaw re-appeared he would be seen and signaled, and when the chance came he would be arrested. This could not be accomplished when he was in his automobile on land or in his boat on the water. No; he must be seized suddenly, before he had any opportunity to escape by means of that speed which no other machine could equal.

I was therefore all alert, awaiting an order from Mr. Ward to start out with my men. But the order did not arrive, for the very good reason that the man whom it concerned remained undiscovered. The end of July approached. The newspapers continued the excitement. They published repeated rumors. New clues were constantly being announced. But all this was mere idle talk. Telegrams reached the police bureau from every part of America, each contradicting and nullifying the others. The enormous rewards offered could not help but lead to accusations, errors, and blunders, made, many of them, in good faith. One time it would be a cloud of dust, which must have contained the automobile. At another time, almost any wave on any of America's thousand lakes represented the submarine. In truth, in the excited state of the public imagination, apparitions assailed us from every side.

At last, on the twenty-ninth of July, I received a telephone message to come to Mr. Ward on the instant.

Twenty minutes later I was in his cabinet.

"You leave in an hour, Strock," said he.

"Where for?"

"For Toledo."

"It has been seen?"

"Yes. At Toledo you will get your final orders."

"In an hour, my men and I will be on the way."

"Good! And Strock, I now give you a formal order."

"What is it, Mr. Ward?"

"To succeed—this time to succeed!"

END OF PART I

Worlds Unknown

—*By* **Leland S. Copeland.**

A billion stars have merged their sheen
  To form a disk of light
Beyond the frigid silences
  That void eternal night;
Ten million years away it looms,
  A telescopic sight.

The dinosaur was lord of earth,
  In Mesozoic days,
And neither ape nor man had life
  When that vast stellar maze
Beyond the gulfs of time released
  The light that meets our gaze.

And lost within that universe,
  Within its milky way,
How many worlds around their suns
  Have woven night and day
For countless thinking things like men,
  Now deep in stone or clay.

Their stories, caught in light, have come
  To us unskilled to know
The comedy and tragedy,
  The glint of friend and foe,
Within this cryptic message from
  A far and long ago.

The REVOLT OF THE PEDESTRIANS

by David H. Keller M.D.

For a day the average New Yorker, white gripped with fear, trying with fright, remained within his car. Then came mass meetings, [illegible] parades. Into this world of horror Mayor [illegible] was dragged from his office building.

CRASH!!

"Damn these pedestrians anyway!"

A deathly moan and a determined mutter of, "Your whole race will pay for this!" came in one breath from the automobile, the chauffeur, the murdered mother, and the ghastly lips of the little pedestrian son who was left mercilessly with the lifeless corpse in the slaughter pen of humanity.

A young pedestrian mother was walking slowly down a country road holding her little son by her hand. They were both beautiful examples of pedestrians, though tired and dusty from long days spent on their journey from Ohio to Arkansas, where the pitiful remnant of the doomed species were gathering for the final struggle. For several days these two had walked the roads westward, escaping instant death again and again by repeated miracles. Yet this afternoon, tired, hungry and hypnotized by the setting sun in her face, the woman slept even as she walked and only woke screaming, when she realized that escape was impossible. She succeeded in pushing her son to safety in the gutter, and then died instantly beneath the wheels of a skilfully driven car, going at sixty miles an hour.

The lady in the sedan was annoyed at the jolt and spoke rather sharply to the chauffeur through the speaking tube.

"What was that jar, William?"

"Madam, we have just run over a pedestrian."

"Oh, is that all? Well, at least you should be careful."

"There is only one way to hit a pedestrian safely, Madam, when one is going sixty miles an hour and that is to hit him hard."

"William is such a careful driver," said the Lady to her little daughter. "He just ran over a pedestrian and there was only the slightest jar."

The little girl looked with pride on her new dress. It was her eighth birthday and they were going to her grandmother's for the day. Her twisted atrophied legs moved in slow rhythmic movements. It was her mother's pride to say that her little daughter had never tried to walk. She could think, however, and something was evidently worrying her. She looked up.

"Mother!" she asked. "Do pedestrians feel pain the way we do?"

"Why, of course not, Darling," said the mother. "They are not like us, in fact some say they are not human beings at all."

"Are they like monkeys?"

"Well, perhaps higher than apes, but much lower than automobilists."

The machine sped on.

Miles behind a terror-stricken lad lay sobbing on the bleeding body of his mother, which he somehow had found strength to drag to the side of the road. He remained there till another day dawned and then left her and walked slowly up the hills into the forest. He was hungry and tired, sleepy and heart broken but he paused for a moment on the crest of the hill and shook his fist in inarticulate rage.

That day, a deep hatred was formed in his soul.

The world had gone automobile wild. Traffic cops had no time for snail-like movements of walkers—they were a menace to civilization—a drawback to progress—a defiance to the development of science. Nothing mattered in a man's body but his brains.

Gradually machinery had replaced muscle as a means of attaining man's desire on earth. Life consisted only of a series of explosions of gasoline or alcohol—air mixtures or steam expansion in hollow cylinders and turbines, and this caused ingeniously placed pistons to push violently against shafts which caused power to be applied wherever the mind of man dictated. All mankind was accomplishing their desires by mechanical energy made in small amounts for individual purposes, and in large amounts transmitted over wires as electricity for the use of vast centers of population.

The sky always had its planes; the higher levels for the inter-city express service, the lower for individual suburban traffic—the roads, all of reinforced concrete, were often one-way roads, exacted by the number of machines in order to avoid continual collisions. While part of the world had taken readily to the skies, the vast proportion had been forced, by insufficient development of the semi-circular canals, to remain on earth.

The automobile had developed as legs had atrophied. No longer content to use it constantly outdoors, the successors of Ford had perfected the smaller individual machine for use indoors, all steps being replaced by curving ascending passages. Men thus came to live within metal bodies, which they left only for sleep. Gradually, partly through necessity and partly through inclination, the automobile was used in sport as well as in play. Special types were developed for golf; children seated in autocars rolled hoops through shady parks; lazily, prostrate on one, a maiden drifted through the tropical waters of a Florida resort. Mankind had ceased to use their lower limbs.

With disuse came atrophy: with atrophy came progressive and definite changes in the shapes of mankind: with these changes came new conceptions of beauty-feminine. All this happened not in one generation, nor in ten, but gradually in the course of centuries.

HERE at last is a different story with a different theme. What will happen to us, the author must have asked himself, if we continue to ride in cars for centuries to come? You may laugh at the idea that we will lose the use of our legs entirely, but the idea is not as foolish as it may sound.

There is excellent science in this story, and if you do not believe that too much riding in cars is bad for you, just speak to your doctor and get his advice.

Here is a story worth reading because many of the things of which the author speaks are gradually coming about. There was a time when pedestrians had certain rights. In our large cities, however, these rights are practically lost even now. But read for yourself, and learn.

CUSTOMS changed so laws changed. No longer were laws for everyone's good but only for the benefit of the automobilist. The roads, formerly for the benefit of all, were finally restricted to those in machines. At first it was merely dangerous to walk on the highways; later it became a crime. Like all changes, this came slowly. First came a law restricting certain roads to automobilists; then came a law prohibiting pedestrians from the use of roads; then a law giving them no legal recourse if injured while walking on a public highway; later it became a felony to do so.

Then came the final law providing for the legal murder of all pedestrians on the highway, wherever

or whenever they could be hit by an auto.

No one was content to go slowly—all the world was crazed by a desire for speed. There was also a desire, no matter where an automobilist was, to go to some other city. Thus Sundays and holidays were distinguished by thousands and millions of automobilists going "somewhere," none being content to spend the hours of leisure quietly where they were. Rural landscapes consisted of long lines of machines passing between walls of advertisements at the rate of 60 miles an hour, pausing now and then at gasoline filling stations, at road houses or to strip an occasional tree of its blooms. The air was filled with vapors from the exhausts of machinery and the raucous noise of countless horns of all description. No one saw anything: no one wanted to see anything: the desire of each driver was to drive faster than the car ahead of his. It was called in the vernacular of the day—"A quiet Sunday in the country."

There were no pedestrians; that is, almost none. Even in the rural districts mankind was on wheels mechanically propelled. Such farming as was done was done by machinery. Here and there, clinging like mountain sheep to inaccessible mountain-sides, remained a few pedestrians who, partly from choice, but mainly from necessity, had retained the desire to use their legs. These people were always poor. At first the laws had no terror for them. Every state had some families who had never ceased to be pedestrians. On these the automobilists looked first with amusement and then with alarm. No one realized the tremendous depth of the chasm between the two groups of the Genus Homo till the national law was passed forbidding the use of all highways to pedestrians. At once, all over the United States, the revolt of the Walkers began. Although Bunker Hill was hundreds of years away, the spirit of Bunker Hill survived, and the prohibition of walking on the roads only increased the desire to do so. More pedestrians than ever were accidentally killed. Their families retaliated by using every effort to make automobiling unpleasant and dangerous—nails, tacks, glass, logs, barbed wire, huge rocks were used as weapons. In the Ozarks, backwoodsmen took delight in breaking windshields and puncturing tires with well-directed rifle shots. Others walked the roads and defied the automobilists. Had the odds been equal, a condition of anarchy would have resulted, being unequal, the pedestrians were simply a nuisance. Class-consciousness reached its acme when Senator Glass of New York rose in the Senate Chambers and said in part:

"A race that ceases to develop must die out. For centuries mankind has been on wheels, and thus has advanced towards a state of mechanical perfection. The pedestrian, careless of his inherent right to ride, has persisted not only in walking, but even has gone so far as to claim equal rights with the higher type of automobilists. Patience has ceased to be a virtue. Nothing more can be done for these miserable degenerates of our race. The kindest thing to do now is to inaugurate a process of extermination. Only thus can we prevent a continuation of the disorders which have marked the otherwise uniform peaceful history of our fair land. There is, therefore, nothing for me to do save to urge the passage of the 'Pedestrian Extermination Act.' This as you know provides for the instant death of all pedestrians wherever and whenever they are found by the Constabulary of each State. The last census shows there are only about ten thousand left and these are mostly in a few of the mid-western states. I am proud to state that my own constituency, which up to yesterday had only one pedestrian, an old man over 90 years of age, has now a clear record. A telegram just received states that fortunately he tottered on a public road in a senile effort to visit his wife's grave and was instantly killed by an automobilist. But though New York has at present none of these vile degenerates, we are anxious to aid our less fortunate states."

The law was instantly passed, being opposed only by the Senators from Kentucky, Tennessee and Arkansas. To promote interest, a bounty was placed on each pedestrian killed. A silver star was given to each county reporting complete success. A gold star to each state containing only autoists. The pedestrian, like the carrier pigeon, was doomed.

IT is not to be expected that the extermination was immediate or complete. There was some unexpected resistance. It had been in effect one year when the pedestrian child swore vengeance on the mechanical means of destroying humanity.

Sunday afternoon a hundred years later, the Academy of Natural Sciences in Philadelphia was filled with the usual throng of pleasure seekers, each in his own auto-car. Noiselessly, on rubber-tired wheels, they journeyed down the long aisles, pausing now and then before this exhibit or that which attracted their individual attention. A father was taking his little boy through and each was greatly interested: the boy in the new world of wonders, the father in the boy's intelligent questions and observations. Finally the boy stopped his auto-car in front of a glass case.

"What is that, Father? They look as we do, only what peculiar shapes."

"That, my son, is a family of pedestrians. It was long ago it all happened and I know of it only because my mother told me about them. This family was shot in the Ozark Mountains. It is believed they were the last in the world."

"I am sorry," said the boy, slowly. "If there were more, I would like you to get a little one for me to play with."

"There are no more," said the father. "They are all dead."

The man thought he was telling the truth to his son. In fact, he prided himself on always being truthful to children. Yet he was wrong. For a few pedestrians remained, and their leader, in fact, their very brains, was the great-grandson of the little boy, who had stood up on the hill with hatred in his heart long before.

Irrespective of climatic conditions, environment and all varieties of enemies, man has always been able to exist. With the race of Pedestrians it was in very truth the survival of the fittest. Only the most agile, intelligent and sturdy were able to survive the systematic attempt made to exterminate them. Though reduced in numbers they survived: though deprived of all the so-called benefits of modern civilization, they existed. Forced to defend not only their individual existence, but also the very life of their race, they gained the cunning of their backwoodsmen ancestors and kept alive. They lived, hunted, loved, and died and for two generations the

civilized world was unaware of their very existence. They had their political organization, their courts of law. Justice, based on Blackstone and the Constitution, ruled. Always a Miller ruled: first the little boy with hatred in his heart, grown to manhood; then his son, trained from childhood to the sole task of hatred of all things mechanical; then the grandson, wise, cunning, a dream-builder; and finally the great-grandson, Abraham Miller, prepared by three generations for the ultimate revenge.

Abraham Miller was the hereditary president of the Colony of Pedestrians hidden in the Ozark Mountains. They were isolated, but not ignorant; few in number but adaptive. The first fugitives had many brilliant men: inventors, college professors, patriots and even a learned jurist. These men kept their knowledge and transmitted it. They dug in the fields, hunted in the woods, fished in the streams, and builded in their laboratories. They even had automobiles, and now and then, with limbs tied close to their bodies, would travel as spies into the land of the enemy. Certain of the children were trained from childhood to act in this capacity. There is even evidence that for some years one of these spies lived in St. Louis.

It was a colony with a single ambition—a union of individuals for one purpose only; the children lisped it, the school children spoke it daily; the young folks whispered it to each other in the moonlight; in the laboratories it was carved on every wall; the senile gathered their children around and swore them to it; every action of the colony was bent toward one end—

"We will go back."

They were paranoiac in their hatred. Without exception, all of their ancestors had been hunted like wild beasts, exterminated without mercy—like vermin. It was not revenge they desired, but liberty—the right to live as they wished, to go and come as they pleased.

For three generations the colony had preserved the secret of their existence. Year by year as a unit they had lived, worked and died for a single ambition. Now the time had come for the execution of their plans, the fulfillment of their desires. Meanwhile the world of automobilists lived on, materialistic, mechanical, selfish. Socialism had provided comfort for the masses but had singularly failed to provide happiness. All lived, everyone had an income, no one but was provided with a home, food and clothes. But the homes were of concrete; they were uniform, poured out by the million; the furniture was concrete, poured with the houses. The clothing was paper, water-proofed: it was all in one design and was furnished—four suits a year to each person. The food was sold in bricks, each brick containing all the elements necessary for the continuation of life; on every brick was stamped the number of calories. For centuries, inventors had invented till finally life became uniform and work a matter of push buttons. Yet the world of the autoists was an unhappy one, for no one worked with muscles. In summer time it was, of course, necessary to perspire, but for generations no one had sweated. The words "toil," "labor," "work" were marked obsolete in the dictionaries.

Yet no one was happy because it was found to be a mechanical impossibility to invent an automobile that would travel over one hundred and twenty miles an hour and stay on the ordinary country road. The automobilists could not go as fast as they wanted to. Space could not be annihilated; time could not be destroyed.

Besides, everyone was toxic. The air was filled with the dangerous vapors generated by the combustion of millions of gallons of gasoline and its substitutes, even though many machines were electrified. The greatest factor contributing to this toxemia, however, was the greatly reduced excretion of toxins through the skin and the almost negative production of energy through muscular contraction. The automobilists had ceased to work, using the term in its purely archaic form, and having ceased to work, they had ceased to sweat. A few hours a day on a chair in a factory or at a desk was sufficient to earn the necessaries of life. The automobilist never being tired, nature demanded a lesser number of hours spent in sleep. The remaining hours were spent in automobiles, going somewhere; it mattered not where they went so long as they went fast. Babies were raised in machines; in fact, all life was lived in them. The American Home had disappeared—it was replaced by the automobile.

The automobilists were going somewhere but were not sure where. The pedestrians were confident of where they were going.

Society in its modern sense was socialistic. This implied that all classes were comfortable. Crime, as such, had ceased to exist some generations previous, following the putting into force of Bryant's theory that all crime was due to 2 per cent of the population and that if these were segregated and sterilized, crime would cease in one generation. When Bryant first promulgated his thesis, it was received with some scepticism, but its practical application was hailed with delight by everyone who was not directly affected.

YET even in this apparently perfect society there were defects. Though everyone had all the necessities of life, it was not true of luxuries. In other words, there were still rich men and poor men, and the wealthy still dominated the government and made the laws.

Among the rich there were none more exclusive, aristocratic and dominant than the Heislers. Their estate on the Hudson was enclosed by thirty miles of twelve-foot iron fence. Few could boast of having visited there, of having week-ended in the stone palace surrounded by a forest of pine, beach and hemlock. They were so powerful that none of the family had ever held a public office. They made Presidents, but never cared to have one in the family. Their enemies said that their wealth came from fortunate marriages with the Ford and Rockefeller families but, no doubt, this was a falsehood based on jealousy. The Heislers had banks and real estate; they owned factories and office buildings. It was definitely stated that they owned the President of the United States and the Judges of the Supreme Court. One of their possessions was rarely spoken of, or mentioned in the newspapers. The only child of the ruling branch of the family walked.

William Henry Heisler was an unusual millionaire. When told that his wife had presented him with a daughter he promised his Gods (though he was not certain who they were) that he would spend at least an hour a day with this child supervising her care.

For some months nothing unusual was noticed about this little girl baby, though at once all the nurses commented on her ugly legs. Her father simply considered that probably all baby legs were ugly.

At the age of one year, the baby tried to stand and take a step. Even this was passed over, as the pedestricians were united in the opinion that all children tried to use their legs for a few months, but it was a bad habit usually easily broken up like thumb-sucking. They gave the usual advice to the nurses which would have been followed had it not been for her father who merely stated, "Every child has a personality. Let her alone, see what she will do." And in order to insure obedience, he selected one of his private secretaries, who was to be in constant attendance and make daily written reports.

The child grew. There came the time when she was no longer called "baby" but dignified by the name of "Margaretta." As she grew, her legs grew. The more she walked, the stronger they became. There was no one to help her, for none of the adults had ever walked, nor had they seen anyone walk. She not only walked but she objected in her own baby way to mechanical locomotion. She screamed like a baby wild cat at her first introduction to an automobile and never could become reconciled even to the auto cars for house use.

When it was too late, her father consulted everyone who could possibly know anything about the situation and its remedy. Heisler wanted his child to develop her own personality, but he did not want her to be odd. He therefore gathered in consultation, neurologists, anatomists, educators, phychologists, students of child behavior and obtained no satisfaction from them. All agreed that it was a pitiful case of atavism, a throwback. As for a cure, there were a thousand suggestions from psychoanalysis to the brutal splinting and bandaging of the little girl's lower extremeties. Finally, in disgust, Heisler paid them all for their trouble and bribed them all for their silence and told them sharply to go to Hell. He had no idea where this place was, or just what he meant, but found some relief in saying it.

They all left promptly except one who, in addition to his other vocations, followed geneaolgy as an avocation. He was an old man and they made an interesting contrast as they sat facing each other in their autocars. Heisler was middle aged, vigorous, real leader of men, gigantic save for his shrunken legs. The other man was old, gray haired, withered, a dreamer. They were alone in the room, save for the child who played happily in the sunshine of the large bay windows.

"I thought I told you to go to Hell with the rest," growled the leader of men.

"How can I?" was the mild reply "Those others did not obey you They simply autoed out of your home. I am waiting for you to tell me how to go there. Where is this Hell you order us to? Our submarines have explored the ocean bed five miles below sea level. Our aeroplanes have gone some miles toward the stars Mount Everest has been conquered. I read all these journeyings, but nowhere do I read of a Hell. Some centuries ago theologians said it was a place that sinners went to when they died, but there has been no sin since Bryant's two per cent were identified and sterilized. You with your millions and limitless power are as near Hell as you will ever be, when you look at your abnormal child."

"But she is bright mentally, Professor," protested Heisler; "only seven years old but tested ten years by the Simon Binet Scale. If only she would stop this damned walking. Oh! I am proud of her but I want her to be like other girls. Who will want to marry her? It's positively indecent. Look at her. What is she doing?"

"Why, bless me!" exclaimed the old man. "I read of that in a book three hundred years old just the other day. Lots of children used to do that."

"But what is it?"

"Why, it used to be called 'turning somersaults.'"

"But what does it mean? Why does she do it?"

Heisler wiped the sweat off his face.

"It will all make us ridiculous if it becomes known."

"Oh, well, with your power you can keep it quiet—but have you studied your family history? Do you know what blood strains are in her?"

"No. I never was interested. Of course, I belong to the Sons of the American Revolution, and all that sort of thing. They brought me the papers and I signed on the dotted line. I never read them though I paid well to have a book published about it all."

"So you had a Revolutionary ancestor? Where's the book?"

HEISLER rang for his private secretary, who autoed in, received his curt orders and soon returned with the Heisler family history which the old man opened eagerly. Save for the noise made by the child, who was playing with a small stuffed bear, the room was deadly still. Suddenly the old man laughed.

"It is all as plain as can be. Your Revolutionary ancestor was a Miller; Abraham Miller of Hamilton Township. His mother was captured and killed by Indians. They were pedestrians of the most pronounced strain; of course, every one was a pedestrian in those days. The Millers and the Heislers intermarried. That was some hundred years ago. Your Great Grandfather Heisler, had a sister who married a Miller. She is spoken of here on page 330. Let me read it to you.

"'Margaretta Heisler was the only sister of William Heisler. Independent and odd in many ways, she committed the folly of marrying a farmer by the name of Abraham Miller, who was one of the most noted leaders in the pedestrian riots in Pennsylvania. Following his death, his widow and only child, a boy eight years old, disappeared and no doubt were destroyed in the general process of pedestrian extermination. An old letter written by her to her brother, prior to her marriage, contained the boast that she never had ridden in an automobile and never would; that God had given her legs and she intended to use them and that she was fortunate in finally finding a man who also had legs and the desire to live on them, as God had planned men and women to do.'

"There is the secret of this child of yours. She is a reversal to the sister of your great grandfather. That lady died a hundred years ago rather than follow the fashion. You say yourself that this little one nearly died from convulsions when the attempt

was made to put her in an automobile. It is a clear case of heredity. If you try to break the child of the habit, you will probably kill her. The only thing to do is to leave her alone. Let her develop as she wishes. She is your daughter. Her will is your will. The probability is that neither can change the other. Let her use her legs. She probably will climb trees, run, swim, wander where she will."

"So that is the way of it," sighed Heisler. "That means the end of our family. No one would want to marry a monkey no matter how intelligent she is. So you think she will some day climb a tree? If there is a Hell, this is mine, as you suggest."

"But she is happy!"

"Yes, if laughter is an index. But will she be as she grows older? She will be different. How can she have associates? Of course they won't apply that extermination law in her case; my position will prevent that. I could even have it repealed. But she will be lonely—so lonely!"

"Perhaps she will learn to read—then she won't be lonely."

They both looked at the child.

"What is she doing now?" demanded Heisler. "You seem to know more than anyone I ever met about such things."

"Why, she is hopping. Is not that remarkable? She never saw anyone hop and yet she is doing it. I never saw a child do it and yet I can identify it and give it a name. In Kate Greenaway's illustrations, I have seen pictures of children hopping."

"Confound the Millers anyway!" growled Heisler.

After that conversation, Heisler engaged the old man, whose sole duty was to investigate the subject of pedestrian children and find how they played and used their legs. Having investigated this, he was to instruct the little girl.

The entire matter of her exercise was left to him. Thus from that day on a curious spectator from an aeroplane might have seen an old man sitting on the lawn showing a golden-haired child pictures from very old books and talking together about the same pictures. Then the child would do things that no child had done for a hundred years—bounce a ball, skip rope, dance folk dances and jump over a bamboo stick supported by two upright bars. Long hours were spent in reading and always the old man would begin by saying:

"Now this is the way they used to do."

Occasionally a party would be given for her and other little girls from the neighboring rich would come and spend the day. They were polite—so was Margaretta Heisler—but the parties were not a success. The company could not move except in their autocars, and they looked on their hostess with curiosity and scorn. They had nothing in common with the curious walking child, and these parties always left Margaretta in tears.

"Why can't I be like other girls?" she demanded of her father. "Is it always going to be this way? Do you know that girls laugh at me because I walk?"

Heisler was a good father. He held to his vow to devote one hour a day to his daughter, and during that time gave of his intelligence as eagerly and earnestly as he did to his business in the other hours. Often he talked to Margaretta as though she were his equal, an adult with full mental development.

"You have your own personality," he would say to her. "The mere fact that you are different from other people does not of necessity mean that they are right and you are wrong. Perhaps you are both right—at least you are both following out your natural proclivities. You are different in desires and physique from the rest of us, but perhaps you are more normal than we are. The professor shows us pictures of ancient peoples and they all had legs developed like yours. How can I tell whether man has degenerated or improved. At times when I see you run and jump, I envy you. I and all of us are tied down to earth—dependent on a machine for every part of our daily life. You can go where you please. You can do this and all you need is food and sleep. In some ways this is an advantage. On the other hand, the professor tells me that you can only go about four miles an hour while I can go over one hundred."

"But why should I want to go so fast when I do not want to go anywhere?"

"That is just the astonishing thing. Why don't you want to go? It seems that not only your body but also your mind, your personality, your desires are old-fashioned, hundreds of years old-fashioned. I try to be here in the house or garden every day—at least an hour—with you, but during the other waking hours I want to go. You do the strangest things. The professor tells me about it all. There is your bow and arrow, for instance. I bought you the finest firearms and you never use them, but you get a bow and arrow from some museum and finally succeed in killing a duck, and the professor said you built a fire out of wood and roasted it and ate it. You even made him eat some."

"But it was good, father—much better than the synthetic food. Even the professor said the juice made him feel younger."

Heisler laughed, "You are a savage—nothing more than a savage."

"But I can read and write!"

"I admit that. Well, go ahead and enjoy yourself. I only wish I could find another savage for you to play with, but there are no more."

"Are you sure?"

"As much so as I can be. In fact, for the last five years my agents have been scouring the civilized world for a pedestrian colony. There are a few in Siberia and the Tartar Plateau, but they are impossible. I would rather have you associate with apes."

"I dream of one, father," whispered the girl shyly. "He is a nice boy and he can do everything I can. Do dreams ever come true?"

Heisler smiled. "I trust this one will, and now I must hurry back to New York. Can I do anything for you?"

"Yes find some one who can teach me how to make candles."

"Candles? Why, what are they?"

She ran and brought an old book and read it to him. It was called, "The Gentle Pirate," and the hero always read in bed by candle light.

"I understand," he finally said as he closed the book. "I remember now that I once read of their having something like that in the Catholic Churches. So you want to make some? See the professor and order what you need. Hum—candles—why, they would be handy at night if the electricity failed, but then it never does."

"But I don't want electricity. I want candles and matches to light them with."

"Matches?"

"Oh, father! In some ways you are ignorant. I know lots of words you don't, even though you are so rich."

"I admit it. I will admit anything and we will find how to make your candles. Shall I send you some ducks?"

"Oh, no. It is so much more fun to shoot them."

"You are a real barbarian!"

"And you are a dear ignoramus."

So it came to pass that Margaretta Heisler reached her seventeenth birthday, tall, strong, agile, brown from constant exposure to wind and sun, able to run, jump, shoot accurately with bow and arrow, an eater of meat, a reader of books by candle light, a weaver of carpets and a lover of nature. Her associates had been mainly elderly men: only occasionally would she see the ladies of the neighborhood. She tolerated the servants, the maids and housekeeper. The love she gave her father she also gave to the old professor, but he had taught her all she knew and the years had made him senile and sleepy.

There came to her finally the urge to travel. She wanted to see New York with its twenty million automobilists; its hundred story office buildings; its smokeless factories; its standardized houses. There were difficulties in the way of such a trip, and no one knew these better than her father. The roads were impossible and all of New York was now either streets or houses. There being no pedestrians, there was no need of sidewalks. Besides, even Heisler's wealth would not be able to prevent the riot sure to result from the presence in a large city of such a curiosity as a pedestrian. Heisler was powerful, but he dreaded the result of allowing his daughter the freedom of New York. Furthermore, up to this time, her deformity was known only to a few. Once she was in New York, the city papers would publish his disgrace to the world.

SEVERAL of the office buildings in New York City were one hundred stories high. There were no stairways but as a safety precaution circular spiral ramps had been built in each structure for the use of autocars in case the elevators failed to work. This, however, never happened, and few of the tenants ever knew of their existence. They were used at night by the scrub women busily autocarring from one floor to another cleaning up. The higher the floor the purer was the air and the more costly was the yearly rental. Below, in the canyon and the street, an ozone machine was necessary every few feet to purify the air and make unnecessary the use of gas masks. On the upper floors, however, there were pure breezes from off the Atlantic. Noticeable was the absence of flies and mosquitoes; pigeons built their nests in the crevices, and, on the highest roof a pair of American eagles nested year after year in haughty defiance of the mechanical auto, a thousand feet below.

It was in the newest building in New York and on the very highest floor that a new office was opened. On the door was the customary gilded sign, "New York Electrical Co." Boxes had been left there, decorators had embellished the largest room, the final result being that it was simply a standardized office. A stenographer had been installed and sat at a noiseless machine, answering, if need be, the automatic telephone.

To this roomy suite one day in June came, by invitation, a dozen of the leaders of industry. They came, each thinking he was the only one invited to the conference. Surprise as well as suspicion was the marked feature of the meeting. There were three men there who were secretly and independently trying to undermine Heisler and tear him from his financial throne. Heisler himself was there, apparently quiet, but inwardly a seething flame of repressed electricity. The stenographer seated them as they arrived, in order around a long table. They remained in their autocars. No one used chairs. One or two of the men joked with each other. All nodded to Heisler, but none spoke to him.

The furniture, surroundings, stenographer were all part of the standard office in the business section. Only one small portion of the room aroused their curiosity. At the head of the table was an arm chair. None of the men around the table had ever used a chair; none had seen one save in the Metropolitan Museum. The autocar had replaced the chair even as the automobile had replaced the human leg.

The chimes in the tower nearly rang out the two o'clock message. All of the twelve looked at their watches. One man frowned. His watch was some minutes late. In another minute all were frowning. They had a two-o'clock appointment with this stranger and he had not kept it. To them, time was valuable.

Then a door opened and the man walked in. That was the first astonishing thing—and then they marveled at the size and shape of him. There was something uncanny about it—peculiar, weird.

Then the man sat down—in the chair. He did not seem much larger now than the the other men, though he was younger than any of them, and had a brown complexion which contrasted peculiarly with the dead gray-white pallor of the others. Then, gravely, almost mechanically, with clear distinct enunciation, he began to speak.

"I see, gentlemen, that you have all honored me by accepting my invitation to be present this afternoon. You will pardon my not informing any of you that the others were also invited. Had I done so, several of you would have refused to come and without any one of you the meeting would not be as successful as I intended it to be.

"The name of this company is the 'New York Electrical Co.' That is just a name assumed as a mask. In reality, there is no company. I am the representative of the nation of Pedestrians. In fact, I am their president and my name is Abraham Miller. Four generations ago, as, no doubt, you know, Congress passed the Pedestrian Extermination Act. Following that, those who continued to walk were hunted like wild animals, slaughtered without mercy. My great-grandfather, Abraham Miller, was killed in Pennsylvania; his wife was run down on the public highway in Ohio as she was attempting to join the other pedestrians in the Ozarks. There were no battles, there was no conflict. At that time there were only ten thousand pedestrians in all the United States. Within a few years there were none—at least so your ancestors thought. The race of Pedestrians, however, survived. We lived on. The trials

of those early years are written in our histories and taught to our children. We formed a colony and continued our existence although we disappeared from the world as you know it.

"Year by year we lived on until now we number over two hundred persons in our Republic. We are not, in fact never have been ignorant. Always we worked for one purpose and that was the right to return to the world. Our motto for one hundred years has been:

'We will go back.'

"So I have come to New York and called you into conference. While you were selected for your influence, wealth and ability, there was present in every instance another important reason. Each of you is a lineal decendant of a United States Senator who voted for the Pedestrian Extermination Act. You can readily see the significance of that. You have the power to undo a great injustice done to a branch of American citizens. Will you let us come back? We want to come back as pedestrians, to come and go as we please, safely. Some of us can drive automobiles and aeroplanes, but we don't want to. We want to walk, and if a mood strikes us to walk in the highway, we want to do it without constant danger of death. We do not hate you, we pity you. There is no desire to antagonize you; rather we want to cooperate with you.

"WE believe in work—muscle work No matter what our young people are trained for, they are taught to work—to do manual work. We understand machinery, but do not like to use it. The only help we accept is from domestic animals, horses, and oxen. In several places we use water power to run our grist mills and saw our timbers. For pleasure we hunt, fish, play tennis, swim in our mountain lake. We keep our bodies clean and try to do the same with our minds. Our boys marry at 21—our girls at 18. Occasionally a child grows up to be abnormal—degenerate. I frankly say that such children disappear. We eat meat and vegetables, fish, and grain raised in our valley. The time has come when we cannot care for a continued increase in population. The time has come when we must come back into the world. What we desire is a guarantee of safety. I will now leave you in conference for fifteen minutes, and at the end of such time I will return for an answer. If you have any questions, I will answer them then."

He left the room. One of the men rolled over to the telephone, found the wire cut; another went over to the door and found it locked. The stenographer had disappeared. There followed sharp discussion marked by temper and lack of logic. One man only kept silent. Heisler sat motionless: so much so that the cigar, clenched between his teeth, went out.

Then Miller came back. A dozen questions were hurled at him. One man swore at him. Finally there was silence.

"Well!" questioned Miller.

"Give us time—a week in which to discuss it—to ascertain public opinion," urged one of them.

"No," said Heisler, "let us give our answer now."

"Oh, of course," sneered one of his bitter opponents. "Your reason for giving a decision is plain, though it has never been in the newspapers."

"For that," said Heisler, "I am going to get you. You are a cur and you know it or you would not drag my family into this."

"Oh, H—! Heisler—you can't bluff me any more!"

Miller hit the table with his fist—

"What's your answer?"

One of the men held up his hand for an audience.

"We all know the history of Pedestrianism: the two groups represented here cannot live together. There are two hundred million of us and two hundred of them. Let them stay in their valley. That is what I think. If this man is their leader, we can judge what the colony is like. They are ignorant anarchists. There is no telling what they would demand if we listened to them. I think we should have this man arrested. He is a menace to society."

That broke the ice. One after another they spoke, and when they finished, it was plain that all save Heisler were hostile, antagonistic and merciless. Miller turned to him—

"What is your verdict?"

"I am going to keep quiet. These men know it all. You have heard them. They are a unit. What I would say can make no difference. In fact, I don't care. For some time I have ceased to care about anything."

Miller turned in his swivel chair and looked out over the city. In some ways it was a pretty city, if one liked such a place. Under him, in the city streets, in the bee-hives, over twenty million automobilists spent their lives on wheels. Not one in a million had a desire beyond the city limits; the roads connecting the metropolis with other cities were but urban arteries wherein the automobiles passed like corpuscles, the auto-trucks proceeded like plasma. Miller feared the city, but he pitied the legless pigmies inhabiting it.

Then he turned again and asked for silence.

"I wanted to make a peaceful adjustment. We desire no more bloodshed, no more internecine strife. You who lead public sentiment have by your recent talk shown me that the pedestrian can expect no mercy at the hands of the present Government. You know and I know that this is no longer a nation where the people rule. You rule. You elect whom you please for senators, for presidents; you snap your whip and they dance. That is why I came to you men, instead of making a direct appeal to the Government. Feeling confident what your action would be, I have prepared this short paper which I will ask you to sign. It contains a single statement:

'The Pedestrians cannot return.'

"When you have all signed this, I will explain to you just what we will do."

"Why sign it?" said the first man, the one seated to the right of Miller. "Now my idea is this!" and he crumpled the paper to a tight ball and threw it under the table. His conduct was at once followed by applause. Only Heisler sat still. Miller looked out the window till all was quiet.

FINALLY he spoke again:

"In our colony we have perfected a new electro-dynamic principle. Released, it at once separates the atomic energy which makes possible all movement, save muscle movement. We have tested this out with smaller machines in limited space and know exactly what we can do. We do not know how to

restore the energy in any territory where we have once destroyed it. Our electricians are waiting for my signal transmitted by radio. In fact, they have been listening to all this conversation, and I will now give them the signal to throw the switch. The signal is our motto,

'We will come back.' "

"So that is the signal?" sneered one of the men. "What happened?"

"Nothing much," replied Heisler, "at least I see no difference. What was supposed to happen, Abraham Miller?"

"Nothing much," said Miller, "only the destruction of all mankind except the pedestrians. We tried to imagine what would happen when our electricians threw the switch and released this new principle, but even our sociologists could not fully imagine what would be the result. We do not know whether you can live or die—whether any of you can survive. No doubt the city dwellers will die speedily in their artificial bee-hives. Some in the country may survive."

"Hello, hello!" exclaimed a multi-millionaire, "I feel no different. You are a dreamer of dreams. I am leaving and will report you at once to the police. Open your damn door and let us out!"

Miller opened the door.

Most of the men pressed their starting button and took hold of the steering rod. Not a machine moved. The others startled, tried to leave. Their auto cars were dead. Then one, with a hysterical curse, raised an automatic at Miller and pulled the trigger. There was a click—and nothing more.

Miller pulled out his watch.

"It is now 2:40 P. M. The automobilists are beginning to die. They do not know it yet. When they do, there will be a panic. We cannot give any relief. There are only a few hundred of us and we cannot feed and care for hundreds of millions of cripples. Fortunately there is a circular inclined plane or ramp in this building and your autocars are all equipped with brakes. I will push you one at a time to the plane, if you will steer your cars. Obviously you do not care to remain here and equally obviously the elevators are not running. I will call on my stenographer to help me. Perhaps you suspected before that he was a pedestrian trained from boyhood to take female parts. He is one of our most efficient spies. And now we will say goodbye. A century ago you knowingly and willingly tried to exterminate us. We survived. We do not want to exterminate you, but I fear for your future."

Thereupon he went behind one of the autocars and started pushing it towards the doorway. The stenographer, who had reappeared as a pedestrian, and in trousers, took hold of another car. Soon only Heisler was left. He held up his hand in protest.

"Would you mind pushing me over to that window?"

Miller did so. The automobilist looked out curiously.

"There are no aeroplanes in the sky. There should be hundreds."

"No doubt," replied Miller, "they have all planed down to earth. You see they have no power."

"Then everything has stopped?"

"Almost. There is still muscle power. There is still power produced by the bending of wood as in a bow and arrow—also that produced by a metal coil like the main spring in a watch. You notice your watch is still running. Of course, domestic animals can still produce power that is just a form of muscle power. In our valley we have grist mills and saw mills running by water power. We can see no reason why they should not keep on; all other power is destroyed. Do you realize it? There is no electricity, no steam, no explosions of any kind. All those machines are dead." Heisler pulled out a handkerchief, slowly, automatically and wiped the sweat from his face as he said:

"I can hear a murmur from the city. It rises up to this window like distant surf beating rhythmically against a sandy shore. I can hear no other noise, only this murmur. It recalls to my mind the sound of a swarm of bees leaving their old hive and flying compactly through the air with their queen in the center, trying to find a new home. There is a sameness to the noise like a distant waterfall. What does it mean? I think I know, but I cannot bear to say it with words."

"It means," said Miller, "that below us and around us twenty million people are beginning to die in office buildings, stores and homes; in subways, elevators and trains; in tubes and ferry boats; on the street, and in the restaurant twenty million people suddenly realize that they cannot move. No one can help them. Some have left their cars and are trying to pull themselves along on their hands, their withered legs helplessly trailing behind them. They are calling to each other for help, but even now they cannot know the full extent of the disaster. By tomorrow each man will be a primitive animal. In a few days there will be no food, no water. I hope they will die quickly—before they eat each other. The nation will die and no one will know about it, for there will be no newspapers, no telephones, no wireless. I will communicate with my people by carrier pigeons. It will be months before I can rejoin them. Meanwhile I can live. I can go from place to place. The sound you hear from the city is the cry of a soul in despair."

HEISLER grabbed Miller's hand convulsively. "But if you made it stop, you can make it start?"

"No—we stopped it with electricity. There is now no more electricity. I presume our own machines were at once put out of power."

"So we are going to die?"

"I believe so. Perhaps your scientists can invent a remedy. We did a hundred years ago. We lived. Your nation tried by every known scientific art to destroy us, but we lived. Perhaps you can. How can I tell? We wanted to arbitrate. All we asked for was equality. You saw how those other men voted and how they thought. If they had had the power, they would instantly have destroyed my little colony. What we did was simply done in self-protection."

Heisler tried to light his cigar. The electric lighter would not work, so he held it dry in his mouth, in one corner, chewing it.

"You say your name is Abraham Miller? I believe we are cousins of some sort. I have a book that tells about it."

"I know all about that. Your great-grandfather and my great-grandmother were brother and sister."

"I believe that is what the professor said, except

that at that time we did not know about you. What I want to talk about, however, is my daughter."

The two men talked on and on. The murmur continued to mount from the city, unceasing, incessant, full of notes new to the present generation. Yet at the distance—from the earth below to the hundredth story above, it was all one sound. Though composed of millions of variants, it blended into unity. Miller finally began walking up and down, from one office wall to the window and back again.

"I thought no one more free from nerves than I was. My whole life has been schooled in preparation for this moment. We had right, justice, even our forgotten God on our side. I still can see no other way, no other way, but this makes me sick, Heisler; it nauseates me. When I was a boy I found a mouse caught in a barn door, almost torn in two. I tried to help it and the tortured animal bit my finger so I simply had to break its neck. It couldn't live—and when I tried to help it, it bit me, so, I had to kill it. Do you understand? I had to, but, though I was justified, I grew deadly sick; I vomited on the barn floor. Something like that is going on below there. Twenty million deformed bodies all around us are beginning to die. They might have been men and women like those we have in the colony but they became obsessed with the idea of mechanical devices of all kinds. If I tried to help—went into the street now—they would kill me. I couldn't keep them off me—I couldn't kill them fast enough. We were justified—man—we were justified, but it makes me sick."

"It does not affect me that way," replied Heisler, "I am accustomed to crushing out my opponents. I had to, or they would crush me. I look on all this as a wonderful experiment. For years I have thought about our civilization—on account of my daughter. I have lost interest. In many ways I have lost my fighting spirit. I don't seem to care what happens, but I would like to follow that cur down the circular spiral plane and wrap my hands around his neck. I don't want him to die of hunger."

"No. You stay here. I want you to write a history of it all—just how it happened. We want an accurate record to justify our action. You stay here and work with my stenographer. I am going to find your daughter. We cannot let a pedestrian suffer. We will take you back with us. With suitable apparatus you could learn to ride a horse."

"You want me to live?"

"Yes, but not for yourself. There are a dozen reasons. For the next twenty years you can lecture to our young people. You can tell them what happened when the world ceased to work, to sweat, when they deliberately exchanged the home for the automobile and toil and labor for machinery. You can tell them that and they will believe you."

"Wonderful!" exclaimed Heisler. "I have made Presidents and now I become a legless example for a new world."

"You will attain fame. You will be the last automobilist."

"Let's start," urged Heisler. "Call your stenographer!"

The stenographer had been in New York one month prior to the meeting of Miller and the representatives of the automobilists. During that time, thanks to his early training in mimicry as a spy, he had been absolutely successful in deceiving all he came in contact with. In his autocar, dressed as a stenographer, his face perfumed and painted, and rings on his fingers, he passed unnoticed amid the other thousands of similar women. He went to their restaurants and to their theatres. He even visited them in their homes. He was the perfect spy; but he was a man.

He had been trained to the work of a spy. For years he had been imbued with loyalty to an enthusiasm for his republic of pedestrians. He had sworn to the oath—that the republic should come first. Abraham Miller had selected him because he could trust him. The spy was young, with hardly a down on his cheeks. He was celibate. He was patriotic.

BUT for the first time in his life, he was in a big city. The firm on the floor below employed a stenographer. She was a very efficient worker in more ways than one and there was that about the new stenographer that excited her interest. They met and arranged to meet again. They talked about love, the new love between women. The spy did not understand this, having never heard of such a passion, but he did understand eventually, the caresses and kisses. She proposed that they room together, but he naturally found objections. However, they had spent much of their spare time together. More than once the pedestrian had been on the point of confiding to her, not only concerning the impending calamity, but also his real sex and his true love.

In such cases where a man falls in love with a woman the explanation is hard to find. It is always hard to find. Here there was something twisted, a pathological perversion. It was a monstrous thing that he should fall in love with a legless woman when he might by waiting, have married a woman with columns of ivory and knees of alabaster. Instead, he loved and desired a woman who lived in a machine. It was equally pathological that she should love a woman. Each was sick—soul-sick, and each to continue the intimacy deceived the other. Now with the city dying beneath him, the stenographer felt a deep desire to save this legless woman. He felt that a way could be found, somehow, to persuade Abraham Miller to let him marry this stenographer—at least let him save her from the debacle

So in soft shirt and knee trousers he cast a glance at Miller and Heisler engaged in earnest conversation and then tiptoed out the door and down the inclined plane to the floor below. Here all was confusion. Boldly striding into the room where the stenographer had her desk, he leaned over her and started to talk. He told her that he was a man, a pedestrian. Rapidly came the story of what it all meant, the cries from below, the motionless autocars, the useless elevators, the silent telephones. He told her that the world of automobilists would die because of this and that, but that she would live because of his love for her. All he asked was the legal right to care for her, to protect her. They would go somewhere and live, out in the country. He would roll her around the meadows She could have geese, baby geese that would come to her chair when she cried, "Weete, weete."

The legless woman listened. What pallor there might be in her cheeks was skillfully covered with rouge. She listened and looked at him, a man, a

man with legs, walking. He said he loved her, but the person she had loved was a woman; a woman with dangling, shrunken, beautiful legs like her own, not muscular monstrosities.

She laughed hysterically, said she would marry him, go wherever he wanted her to go, and then she clasped him to her and kissed him full on the mouth, and then kissed his neck over the jugular veins, and he died, bleeding into her mouth, and the blood mingled with rouge made her face a vivid carmine. She died some days later from hunger.

Miller never knew where his stenographer died. Had he time he might have hunted for him, but he began to share Heisler's anxiety about the pedestrian girl isolated and alone amid a world of dying automobilists. To the father she was a daughter, the only child, the remaining and sole branch of his family. To Miller, however, she was a symbol. She was a sign of nature's revolt, an indication of her last spasmodic effort to restore mankind to his former place in the world. Her father wanted her saved because she was his daughter, the pedestrian because she was one of them, one of the race of pedestrians.

On that hundredth floor kegs of water, stores of food had been provided. Every provision had been made to sustain life in the midst of death. Heisler was shown all these. He was made comfortable and then Miller, with some provisions, a canteen of water, a road map, and a stout club in his grasp, left that place of peace and quiet and started down the spiral stairway. At the best it was simply difficult walking, the spirals being wide enough to prevent dizziness. What Miller feared was the obstruction of the entire passage at some point by a tangled mass of autocars, but evidently all cars which had managed to reach the plane had been able to descend. He paused now and then at this floor or that, shuddered at the cries he heard and then went on, down, down into the street.

Here it was even worse than he expected. On the second the electro-dynamic energy had been released from the Ozark valley—on that very second all machinery had ceased. In New York City twenty million people were in automobiles or autocars at that particular second. Some were working at desks, in shops; some were eating in restaurants, loafing at their clubs; others were going somewhere. Suddenly everyone was forced to stay where he was. There was no communication save within the limits of each one's voice; the phone, radio, newspapers were useless. Every autocar stopped; every automobile ceased to move. Each man and woman was dependent on his own body for existence; no one could help the other, no one could help himself. Transportation died and no one knew it had happened save in his own circle, as far as the eye could see or the ear could hear, because communication had died with the death of transportation. Each automobilist stayed where he happened to be at that particular moment.

THEN slowly as the thought came to them that movement was impossible, there came fear and with fear, panic. But it was a new kind of panic All previous panics consisted in the sudden movement of large numbers of people in the same direction, fleeing from a real or an imaginary fear. This panic was motionless and for a day the average New Yorker, while gripped with fear, crying with fright, remained within his car. Then came mass-movement but not the movement of previous panics. It was the slow tortuous movement of crippled animals dragging legless bodies forward by arms unused to muscular exercise. It was not the rapid, wind-like movement of the frenzied panic stricken mob, but a slow, convulsive, worm-like panic. Word was passed from one to another in hoarse whisperings that the city was a place of death, would become a morgue, that in a few days there would be no food. While no one knew what had happened everyone knew that the city could not live long unless food came regularly from the country, and the country suddenly became more than long cement roads between sign-boards. It was a place where food could be procured and water. The city had become dry. The mammoth pump throwing millions of gallons of water to a careless population had ceased to pump. There was no more water save in the rivers encircling the city and these were filthy, man-polluted. In the country there must be water somewhere.

So, on the second day began the flight from New York—a flight of cripples, not of eagles; a passage of humanity shaped like war-maimed soldiers. Their speed was not uniform, but the fastest could only crawl less than a mile an hour. Philosophers would have stayed where they were and died. Animals, thus tortured, would quietly wait the end, but these automobilists were neither philosophers nor animals, and they had to move. All their life they had been moving. The bridges were the first spaces to show congestion. On all of them were some automobiles, but traffic is not heavy at 2 in the afternoon. Gradually, by noon of the second day, these river highways were black with people crawling to get away from the city. There came congestion, and with congestion, stasis, and with stasis, simply a writhing without progression. Then on top of this stationary layer of humanity crawled another layer which in its turn reached congestion, and on top of the second layer a third layer. A dozen streets led to each bridge but each bridge was only as wide as a street. Gradually the outer rows of the upper layer began falling into the river beneath. Ultimately many sought this termination. From the bridges came, ultimately, a roar like surf beating against a rock-bound shore. In it was the beginnings of desperate madness. Men died quickly on the bridges, but before they died they started to bite each other. Within the city certain places showed the same congestion. Restaurants and cafés became filled with bodies almost to the ceiling. There was food here but no one could reach it save those next to it and these were crushed to death before they could profit by their good fortune, and dying, blocked with bodies, those who remained alive and able to eat.

Within twenty-four hours mankind had lost its religion, its humanity, its high ideals. Every one tried to keep himself alive even though by doing so he brought death sooner to others. Yet in isolated instances, individuals rose to heights of heroism. In the hospitals an occasional nurse remained with her patients, giving them food till she with them died of hunger. In one of the maternity wards a mother gave birth to a child Deserted by everyone she placed the child to her breast and kept it there till hunger pulled down her lifeless arms.

It was into this world of horror that Miller walked as he emerged from the office building. He had provided himself with a stout club but hardly any of the crawling automobilists noticed him. So he walked slowly over to Fifth Avenue and then headed north, and as he walked he prayed, though on that first day he saw but little of what he was to see later on.

On and on he went till he came to water and that he swam and then again he went on and by night he was out in the country where he ceased to pray continuously. Here he met an occasional autoist, who was simply annoyed at his machine breaking down. No one in the country realized at first what had really happened; no one ever fully realized before he died in his farm house, just what it all meant. It was only the city dwellers that knew, and they did not understand.

The next day Miller rose early from the grass and started again, after carefully consulting the road map. He avoided the towns, circling them. He had learned the desire, constant, incessant, inescapable, to share his provisions with those starving cripples, and he had to keep his strength and save food for her, that pedestrian girl, alone among helpless servants, within an iron fence thirty miles long. It was near the close of the second day of his walk. For some miles he had seen no one. The sun low in the forest of oaks threw fantastic shadows over the concrete road.

Down the road, ever nearing him came a strange caravan. There were three horses tied to each other. On the backs of two were bundles and jugs of water fastened stoutly but clumsily. On the third horse an old man rested in a chair-like saddle and at this time he slept, his chin resting on his chest, his hands clutching, even in sleep, the sides of the chair. Leading the first horse walked a woman, tall, strong, lovely in her strength, striding with easy pace along the cement road. On her back was slung a bow with a quiver of arrows and in her right hand she carried a heavy cane. She walked on fearlessly, confidently; she seemed filled with power, confidence and pride.

Miller paused in the middle of the road. The caravan came near him. Then it stopped in front of him.

"Well," said the woman, and her voice blended curiously with the sunlit shadows and the flickering leaves.

"Well! Who are you and why do you block our way?"

"Why, I am Abraham Miller and you are Margaretta Heisler. I am hunting for you. Your father is safe and he sent me for you."

"And you are a pedestrian?"

"Just as truly as you are!" and so on and on——

The professor woke from his nap. He looked down on the young man and woman, standing, talking, already forgetting that there was anything else in the world.

"Now, that is the way it was in the old days," mused the professor to himself.

It was a Sunday afternoon some hundred years later. A father and his little son were sightseeing in the Museum of Natural Sciences in the reconstructed city of New York. The whole city was now simply a vast museum. Folks went there to see it but no one wanted to live there. In fact, no one wanted to live in such a place as a city when he could live on a farm.

It was a part of every child's education to spend a day or more in an automobilist's city, so on this Sunday afternoon the father and his little son walked slowly through the large buildings. They saw the mastodon, the bison, the pterodactyl. They paused for some time before a glass case containing a wigwam of the American Indian with a typical Indian family. Finally they came to a large wagon, on four rubber wheels, but there was no shaft and no way that horses or oxen could be harnessed to it. In the wagon on seats were men, women and little children. The boy looked at them curiously and pulled at his father's sleeve.

"Look, daddy. What are that wagon and those funny people without legs. What does it mean?"

"That my son is a family of automobilists," and there and then he paused and gave his son the little talk that all pedestrian fathers are required by law to give to their children.

THE END

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by Hugo Gernsback

receiver suddenly became enveloped in a scarlet phosphorescence, glowing softly like the light in an X-ray tube.

I. I Make a Wireless Acquaintance

MY name is Ignaz Montmorency Alier. If that doesn't suit you, call me I. M. Alier, for short. I am a Yankee by birth. Both my father and mother came over on the Mayflower and settled in Yankton, Mass., where they are engaged at present in cactus and ostrich farming. Ever since I was a little boy my father, for reasons best known to himself, taught me to be a worshipper of truth, no matter how painful it might prove. I am glad to say that my father's teachings fell on fertile territory. I have never, consciously, uttered an untruth. The pursuit of truth, since I have grown up has become a mania with me; so much so, in fact, that even a simple exaggeration, made by my best of friends, will drive me frantic.

The average layman will best understand my somewhat peculiar state of mind, as far as truth is concerned, if I say that truth to me is nothing less and nothing more than a hobby—a sort of sport, if you wish. I collect truthful statements as one might collect stamps. Particularly beautiful and original examples of truth are written down by me on large white cards. These cards are all indexed and classified and kept, vertically filed in card files. The originator (may I say inventor?) of these truths is given full credit on these cards, so that it is easy to find years later who made this or that particular truthful statement. You will not think me immodest if I state, in passing, that nine-tenths of the cards bear my own name as author of original and surprising truths. Of course, since truth is a science with me, I realize that such a statement cannot cause much surprise:

I would not take up your valuable time with statements like the above were it not so vitally important to fully acquaint you with my character. For this reason I also find it necessary to give you the following references; any of the individuals and institutions mentioned below will be very glad to vouch for my integrity, honesty, and veracity.* I could give an almost infinite list, but I prefer mentioning only the following:

Hiram O'Rourke, lawyer, Yankton, Mass.

(The above defended me in three breach of promise suits, as well as eight perjury charges of which I was accused.)

Patrick Flanagan, jailkeeper, Yankton, Mass.

Jeremiah Addlecock, jailkeeper, Coffeeville, Me.

Mike Whiffeltree, jailkeeper, Lyreville, Vt.

(The latter knew me intimately for only five months.)

The Ananias Club, Yankton, Mass.

Now that I have thoroughly established my standing I will proceed, and I sincerely hope and trust that no one will question any statements I may be called to make in these pages. They are the bare, unvarnished truth in each and every case. If called upon, I will cheerfully swear to the truth of any of my statements, before a notary. (I am a notary myself.)

As every resident of my home town knows, I own the largest radio plant in the State. I own the only long distance radio telephone station in the country. As is known, I hold the long distance radio telephone record of the world. Even in 1900, when my set was not nearly as perfected as it is to-day, I could talk around the world and converse freely with myself, the message traveling clear around the globe. This fact was described at length in "The London Scientific Gazette of 1900." (See Vol. XX, No. 19, page 39.) It attracted much attention at the time, but it was declared commercially impractical, for the reason that, it was argued, it was not necessary to build a giant wireless station at a tremendous expense in order to talk clear around the globe, to listen to one's own voice; one could talk to one's self without the expensive radio? My critics contended that it would certainly be far less expensive and perhaps more satisfactory.

This argument, quite logical as it was, for the time being discouraged me not a little, but I soon took up my studies anew and made many important new discoveries.

As president and founder of the now defunct *American Wireless Mouse Trap Co.* I learned a lot about rats and mice and this knowledge even to-day is of high importance to me.

The above company, as will be remembered by many, operated at one time, no less than 80,169,509 wireless mouse traps all over the country. If we had not been so eminently successful in killing every mouse and rat in the country, the company would, no doubt, still have been in business. As it is, the American public calls me its greatest living benefactor for ridding the country of these pests, and this alone is honor enough. For the benefit of my young readers who never saw one of my wireless mouse traps, let me give a brief description.

Each trap was constructed like a squirrel cage. The opening to the cage was fashioned in such a manner that a mouse or rat could get into it, but once in, could not of its own accord get out. Now, as anyone knows mice and rats are exceedingly fond of revolving cages. They will travel for miles to get into one. It has a most powerful fascination for

THIS story originally appeared in a number of instalments in 1915, *in the* Electrical Experimenter, *a magazine published by the publishers of* Amazing Stories.

Inasmuch as the former magazine had only a most limited circulation, very few readers have seen the story in print. The author has made a number of minor corrections in preparing it for reprinting, but the story in itself remains substantially the same as originally published.

At the time this story first appeared, it was rather widely acclaimed by a number of newspapers which commented favorably on the extraordinary wealth of technical and scientific data scattered throughout the story.

The wireless telephone particularly, has been exploited to a marked degree by the author, although no commercial radio telephone was in existence at the time. While the story in parts, was written in lighter strain, it might be pointed out, that the reason for this is that all of the original Münchhausen exploits were written in such vein. It may be said at this point, that Baron Münchhausen actually lived, having been born in Hanover, in 1720. He was supposed to have been one of the most monumental liars, even rivalling Ananias in this respect. His exploits have always been treated in lighter vein, and many versions of his adventures exist. It is felt, however, that this does not necessarily detract from the effectiveness of the story, and you will find that it will hold your interest throughout.

The wily Baron's adventures will be published during the next few months in instalments.

* On account of the numerous inquiries received concerning me, I suggest that you enclose a 2-ct stamp for your reply when writing.

them. They simply adore it and go wild about it. I am almost tempted to say that they go crazy about it, for they find it extremely hard to stop once they start running. I based my invention upon this great natural law.

The shaft of the cage was connected to a little dynamo, which was operated at high speed as soon as the mouse or rat started the cage revolving. The dynamo, in turn, was connected to a little wireless set and this in turn was connected to an aerial wire system on the roof of the house. The wireless set was constructed in such a manner that when operated, it would send out a call similar to a Western Union call box. In each locality we had a wireless "central" with operators. As soon as one of the operators received a call, he would look up his call book and see where the call originated. This took only a few seconds. A man would then be dispatched immediately to the house in question, where he would brain the mouse or rat single handed, on the spot, by means of a club. He would next reset the trap and return to headquarters, giving a full itemized report of the case. To the inexperienced, my system of killing the rodents might appear rather long-winded and expensive, but this is just where my insight into human nature came to the fore and made me famous.

Not everybody likes to kill rats and mice. This is particularly true of the feminine humans inhabitating this globe. Why this should be so I do not profess to know, although I have some vague opinions on the subject, which, however, I would rather keep to myself. What, therefore, was more natural than to employ professional ratters and mousers, to perform the disagreeable tasks? In any event, the company was a huge success and many a fair damsel even to-day, sends me highly perfumed letters hailing me as the annihilator of the arch-enemies of the fairer sex.

But I digress from my story. As I said before, I own the largest radio telephone station in the country. It is exceedingly well appointed and contains instruments and apparatus of which the greatest living scientists have as yet not the faintest knowledge

This story starts on a bitter cold December night. I could go to some length and write two or three columns at ten cents a word, stating how the wind sang weirdly through my aerial wires on the roof; how the flames of my log fire cast fantastic shadows about the room; how my cat was softly purring on a chair near by, dreaming of some long departed appetizing canary; how the windows rattled uncannily in the storm; how the trees moaned plaintively outside, and so forth. Thus I could set the scene and prepare you for the story—getting you under tension, as the editor calls it technically.

As a plain matter of fact, however, the aerial wires were full of sleet and therefore could not "sing." Furthermore I was glad that they didn't come down, for that would have caused hardly pleasant music. Then the log fire, too, could not very well have cast fantastic shadows, or any other shadows for that matter, because the log fire happened to be a radiator. Instead of casting fantastic shadows, however, it cast about a lot of rank noise and every now and then made me jump clean out of my chair. Nor could the cat have purred very readily on the chair because to begin with it wasn't a cat at all, but a dog; and he could not have purred even if he had taken lessons at $5 an hour. There were good reasons for this, too. Firstly, it was not a he; it was a she. Secondly, she had been dead for two years and only because she was stuffed so nicely did I keep her. Thirdly, she could positively not have sat on a chair near by, simply because there was only one chair in the place and I was on it. Fourthly, dogs, especially dead dogs, are not known to dream about appetizing canary birds. Then, too, no windows could have rattled in the storm, for my radio station is in the cellar and that cellar has no windows whatsoever. As for the trees moaning plaintively, or otherwise, I explained above that my people were engaged in cactus farming. There are no trees on such a farm, and cactus positively does not moan in a storm. It squeaks.

NOW that you understand the situation fully, I will proceed. It was after 12 o'clock midnight on a cold winter night. My new, loud-talking telephone receivers were on my head and I had just lit a fresh pipe. I had been flirting with my vario-selective coupling-balance which was adjusted to a very long wavelength—96,000 meters, if my memory serves me right—and I was just in the act of tuning down to the wave length of FL.—that's the Paris Eiffel Tower Station. Suddenly, a very faint, but exceedingly high pitched screaming sound, came through my receivers, becoming louder and louder each second. While I was still wondering what this unearthly sound could be, I heard, in a faint but clear voice:

"Alier, Yankton, Mass.—80,000 meters." This sentence was repeated several times. I lost no time in starting my 200 Kilowatt generator, tuned up to 80,000 meters, and yelled into the transmitter in front of me.

"Ship ahoy! This is Alier of Yankton, who's there?" Almost instantly it came:

"It is I, Hieronymus Karl Friedrich, Baron Münchhausen . . ."

At that I almost swallowed my pipe, but just the same, the colossal nerve of that fellow aggravated me.

"You confounded liar, stop your joking," I yelled back, "if you have anything to say, say it and be quick about it, for I am going to bed in a few minutes."

"My son," it came back in sepulchral tones, "I am not at all surprised at your astonishment. Rest assured I expected you to doubt my identity. However, I have proofs. It is now 12.50 a. m. terrestrial time. Kindly mount to the top of your roof. You will find it to be a clear night, with a half full moon in the sky. Take your watch along and observe the moon carefully. Precisely at 1 a. m. I will illuminate the dark half portion of the moon with a red phosphorescence. I will do this three times beginning at 1 a. m., each illumination to last five seconds, with a 10 second interval between each illumination. After this, return to your 'phones. I have spoken. . . ."

The peculiar high pitched screaming sound was heard once more in my receivers. It ran rapidly down the scale, became fainter and fainter—there was a low click in my 'phones and everything was quiet.

I must have sat dumbfounded for at least a minute before I could collect my senses I took the 'phones off my head and wiped off the perspiration mechanically. I am sure I was dazed I looked at my hands, moving them back and forth before my eyes, but I

wasn't certain then that I was awake. So I took a pin lying nearby and shoved it into my thigh. I knew then that I was really awake. I wanted to think, but I had to laugh outright. Why, the thing was preposterous! Some practical radio amateur joker, no doubt, who tried to get me on the roof and then afterward make me the laughing stock of the town.

"Good stunt! Rather novel idea, ha, ha! . . . But that sepulchral, earnest voice, that distinct accent, the peculiar intonation . . . could it . . . ?"

My eyes fell on the clock before me. It was 12:55. At that very moment my 'phones emitted a loud crackling sound, like "static" before a thunderstorm. As I looked on, wondering, the receivers suddenly became enveloped in a scarlet phosphorescence, glowing softly like the light in an X-ray tube.

I know now that my hair must have stood up at the sight of this uncanny phenomenon. I recollect that I grabbed my cap and ran up the stairs, knocking somebody down as I flew by, pushed the trap open and sank down on the roof almost exhausted. Mechanically I pulled out my watch. It was 12:59. I shivered and looked intently at the moon sailing in a beautifully clear sky, in which the stars sparkled with unusual brilliancy.

The moon was half full, the dark half being jet black and undistinguishable from the black sky. A clock nearby started to strike 1 o'clock. The sound was still vibrating in the air when I witnessed a most remarkable phenomenon. The dark portion of the moon was suddenly faintly illuminated with the same scarlet phosphorescence which I had seen only a few seconds earlier around my receivers.

It seemed to me as if there were a gigantic searchlight stationed on the bright side of the moon, throwing a colossal shaft of that scarlet light over on the dark side. This shaft of light was not stationary; it swept rapidly back and forward over the dark face of the moon, illuminating the moon's craters in a wonderful fashion. The phosphorescent light shaft was so long that it actually went clear across the face of the moon and swept out into the space beyond for a considerable distance. It was the most magnificent, inspiring spectacle I had ever witnessed in my life. Suddenly, the light vanished for a short period, just as the mysterious person had said it would. I counted to 10. Just as suddenly the sweeping light shaft reappeared, brushing the moon's dark face backward and forward several times, as before. The light disappeared again; I counted to 10 and it reappeared, going through the identical motions for the third and last time.

For a few seconds I stood fascinated, probably with my mouth wide open. Like one in a trance, I went down to the radio and I still remember that my teeth chattered violently and that I had a cold chill, which shook me from head to foot, while I adjusted the 'phones over my head.

I had scarcely finished, when the high pitched screaming sound was heard again, and in a few seconds the voice with the graveyard tone spoke once more:

"I trust, my boy, that you will not again doubt Baron Münchhausen's word," Here I could distinguish a low chuckle. "But tell me, how did you like my little exhibition?"

"Why, your excellency," I stammered into the transmitter before me. "I really had no idea of offending you before, the whole thing seemed so impossible to me that you can hardly blame me for doubting you. However, after seeing your wonderful lunar fireworks, I stand ready to believe anything and everything that you may say. I assure you, I will swear by it. But would you be so kind as to answer the burning question which is uppermost in my mind just now? Am I not correct in my assumption that your excellency was born in Hanover, Germany, in 1720 and was buried in 1797 in the same locality?"

"Most assuredly, my boy, you have stated the facts correctly. As you say, I was buried in 1797, but if you were to open the coffin to-day, you would not find the bones of Baron Munchhausen. For political reasons, it was very desirable for me to 'die' in 1797. If I had not 'died' just then, I would have been hanged, no doubt. So I had a wax replica of myself made, which resembled me so closely, that it even deceived my trusted valet, Fritz, who came within an ace of placing me in the coffin, while I was sleeping peacefully, but soundly, in a secret room in my attic. If I had not sneezed in my sleep, undoubtedly they would have buried me, and let my wax replica shift for itself in an unfriendly world. While this might have been a regrettable accident, it would hardly have affected me much, for I am immortal, as you no doubt know!" A chuckle was discerned by me at this pun; the Baron, no doubt, liked his own little joke.

"However, in the absence of Fritz, that blunderer, Rosskopf, the embalmer, entered the house very much under the influence of schnapps and by pure chance found the secret room. He saw me sleeping soundly and thought, of course, that I was dead. Either because he was too lazy or else too drunk, I never knew which, he did not cut me open and embalm me in the usual manner; luckily for me. Instead he used a hollow needle and injected the embalming fluid into my veins. I am a sound sleeper, a very sound sleeper, so I did not wake for a long time. As time goes, a very long time indeed. To be accurate, I did not wake up for 110 years. The embalming fluid that Rosskopf used on me was apparently a good brand, for it did not wear out for 110 years, i. e., till A. D. 1907. It seems that this embalming fluid made my body rigid and stiff as stone, and to all intents and purposes, unknown to me, I was as dead as my wax replica, which they had buried the same afternoon. However, it seems my heart continued to beat faintly through all these years and the prolonged rest, instead of aging my body, really made me younger. Although technically I am to-day almost 200 years old, I feel no older than 30. You see what a good rest does! The next thing I knew was when I finally woke up and sneezed about 10 times. I was still on my bed in my secret room!

"You ask how that can be possible. Simplicity itself. Only Fritz and I knew of the secret room. Rosskopf, the embalmer, when he became sober again had promptly forgotten all about it, of course, so he really did not know any more than anyone else.

"As I found out afterward, this is what happened: Fritz, my trusted valet, had gone over to the burial vault to lock up the heavy oak door. But the door must have snapped shut while he was inside the vault. As I lived alone with him, there was no one to release him. He naturally thought I would miss him in time when I would of course, come to free him. I did—in time—110 years later! Poor fellow. I cried a bit when I saw his bones.

"But to go back. I said I woke up trying to sneeze my head off. For a few minutes I could see nothing for the dust I made while sneezing. I got up and felt rather stiff, and as hungry as a bear. I opened the window and looked out. The strange sights I saw fairly made me dizzy. It took me some hours to get used to it all. To make a long story short, it finally dawned on me that I must have slept for many years. In the afternoon, I cautiously walked down and inspected the house, which looked to me the same as on the day I went to sleep. I then ventured out into the neglected, unkempt garden, and after satisfying my hunger by means of a few dozen pears, I sat down on a decaying bench to think about the strange situation. While I pondered thus, I noticed a sheet of printed paper on the ground. It proved to be a part of a recent Hanoverian newspaper. I picked it up casually and tried to read the somewhat unfamiliar type. Suddenly I saw the date; September 29, 1907! It was then—for the first time in my life—that I fainted dead away; the shock was too great.

"But your time is limited, my dear boy, so I will make the story short. Suffice it to say that just as soon as I came to, I went over to the City Hall and explained the whole affair to the Herr Bürgermeister —our mayor. I had no trouble in proving my identity, and the dear fellow overwhelmed me with kindness. He fêted and dined me and insisted that the town of Hanover should give a fitting celebration in my honor. This, however, I declined modestly. During the course of the dinner, he told me that, due to all good traditions of German official red tape, my house and estate were still in the process of liquidation, as I had neglected to leave a will. I filed my will that very day and my lawyers assured me that, as I could prove my identity without doubt, I should be able to inherit my own estate within at least 25 years. They further assured me that I need have no misgivings as to my political offenses which I committed 110 years ago; they argued that these offenses had been outlawed. That took a big load off my mind. Well, I guess we've chatted long enough for to-day, besides my power is getting low. . . ."

"But Your Excellency," I shouted back into my transmitter breathlessly, "won't you please explain how you come to be on such an outlandish place as the moon, and if you are there, how you can exist, for there is certainly no atmosphere on the moon and the temperature is below zero. . . ."

"I would gladly tell you all this now, but it takes time to explain these things," the sound came back very weak and distant, "but as I said before, my power is getting low, so if you will be at your 'phones to-morrow night at 11 p. m., terrestrial time, I will gladly satisfy your curiosity. Good night!"

II. How Muenchhausen and the Allies Took Berlin

I CONFESS that I put in a bad night after my first radio telephone talk with the Baron on that memorable December night. My dreams were wild and fearsome and I awoke at frequent intervals, bathed in perspiration. The whole thing was so uncanny, so preposterous, that when I finally opened my eyes the next morning I began to wonder if the whole thing had not been a wild, extravagant dream.

As yet I had not told anyone about Münchhausen for fear of inevitable ridicule, so by noontime I had become thoroughly convinced that I had dreamed the whole thing from beginning to end. But when I sat down to lunch and my elder brother asked me why I had knocked him down on the stairs on his return from the lodge the night before, I knew that the episode was not a dream after all. So I told my people of my experience and recited my conversation with Mr. Münchhausen. They did not wax enthusiastic as the story proceeded. Instead, when I finished, my father took a deep breath, gave me a queer look and tapped his forehead with his index finger. That was the extent of his comment. He then gave vent to a disgusted snort and started with the soup.

My younger brother sang to the tune of *"Apple-blossom time in Normandy"*:

"When the Nuts are getting ripe in Squirreltown!"

My older brother remarked casually that he had read not so long ago about an eminent Eastern doctor who found that strong radio waves had the peculiar property of producing little explosions inside of the brain. A coherer action, as it were. This, he said, produced what the doctor termed a "wireless brainstorm!"

"A rather dangerous disease, closely resembling hydrophobia," my brother remarked, before attacking his stew.

The rest of my family all made similar intelligent comments, and as the case proved hopeless, I kept quiet and said nothing.

That evening, however, shortly before 11 o'clock, I summoned the yawning obstreperous members of my family to the radio room and fitted everyone with a radio telephone headset; these headsets were connected to my own trusty receivers. I then told my little audience to watch the clock and be prepared to listen to the most remarkable discourse ever held between two humans. Nor did I disappoint my audience. The clock had hardly finished striking the eleventh hour, when the (to me) familiar high-pitched screaming sound was heard again, and a few seconds later Münchhausen's voice vibrated powerfully into our receivers:

"Good evening, my son," he said in his sepulchral voice, "I trust you have had pleasant dreams and that last night's experience has not disturbed you too much."

I hastened to reply that I was doing nicely, but that I found it difficult to persuade my doubting Thomases that his Excellency had really come back to life. At this Münchhausen laughed heartily and said that he had expected as much. He added that if further proofs were wanted, he would be happy to give another lunar exhibition. He volunteered, in addition to sweep the moon's dark quarter this very night with any color we desired, in order to convince even the most skeptical that his return was not a hoax. I could tell by the faces of my hearers that they were beginning to become impressed. A vote of the audience, held right then and there, determined the color to be green. I transmitted this intelligence to the Baron at once, whereupon he promised to light up the invisible dark quarter of the moon in a green phosphorescence for the duration of 20 seconds, beginning at 11 30 p m He added

In less than one second over 500 men were baled together tighter than a bale of compressed cotton—and as helpless.

that our conversation was to be resumed after the "performance."

We thereupon repaired to the roof of the house, everybody keyed to the highest excitement.

I will not go into lengthy details; suffice it to say that, true to his word, at exactly 11.30 p. m. Münchhausen swept the dark part of the moon's surface with an immense shaft of a green phosphorescence, similar to the exhibition he had given for me the night before. If anything, the light shaft was more powerful; this, however, might have been due to the earth's atmosphere being clearer than on the previous night.

I need not go to the trouble of explaining that every one of my family was thoroughly convinced. All were silent and awe struck, and all were as ready as I was to believe anything that Münchhausen might say; and I assure you I was thoroughly convinced.

After the exhibition, we resumed our seats in the radio room, and I suggested that my brother take stenographic notes of the conversation—he was an expert stenographer and had been a reporter on the *New York Times* for five years.

I may add, therefore, that all conversations between Baron Münchhausen and myself, which I shall publish hereafter, are exactly as stated, taken from my brother's stenographic reports. The original notes are open to anyone who doubts their truth.

After we were all seated again and the excitement had cooled down somewhat, I started my generator, tuned to 80,000 meters wave length, and spoke into the transmitter before me:

"Your Excellency, are you there?"

"Yes, indeed, my dear boy," it came back in encouraging tones; "now I suppose I will be bombarded with '42-centimeter' questions for the rest of the evening! What? Let it be known, therefore, that Baron Münchhausen is, as usual, ready for all emergencies. Pray, proceed!"

"Thank you, indeed," I responded, gratefully; "you are taking a load off my mind, for I certainly have a number of questions to ask you. My first question, most naturally, is, "How came you to select me to talk to?"

"For two reasons: First, I knew you to be a truthful individual, just as I am, far-famed and known to be so in your country. The second reason is that I could hear your radio signals right here on the moon, proving to me that you were probably the only one with whom I might converse on earth. My judgment, as usual, proved correct."

"Thank you for the compliment," I replied. "Now for my most important question: 'How on earth did you ever land on the moon, and why?"

The Baron laughed outright at my pun, and proceeded:

"That's a rather long-winded story, but I will try to tell you.

"As I said last night, when I came back to life, I found myself in my old secret room. After my visit to the Mayor, I returned to this room and proceeded to remove my treasure of 10,000 gold ducats, which I had intended to take with me on my contemplated secret flight 110 years ago. It seems that instinct prompted me to exchange this currency for paper money at a local bank that very day. A lucky thing

for me, as you will see shortly. You will believe me when I state that I slept easier that night, with those 20,000 ducats, exchanged into modern thousand mark bills, tucked away securely, in my ancient wallet, under my pillow."

"But, your Excellency," I broke in, "did you not say a minute ago that there were but 10,000 ducats?"

"H-m. That's correct," chuckled the Baron, "but, my dear boy, you seem to forget entirely that gold ducats of the vintage of 1790 sell at a very high premium to-day, on account of the great scarcity of these coins! As a matter of fact, if I had peddled these coins to coin dealers and private coin collectors, I have not the least doubt but that I could have realized a great deal more.

"Well, the next morning, I was awakened by a fearful racket. It seems that word had traveled around that I came back to life, and my enthusiastic townspeople were bent on celebrating my return in a befitting manner. There were about ten brass bands in front of my house, and I estimate that at least three-quarters of the population were assembled around the bands, waiting to see me. I dressed hurriedly and stepped out on the balcony, greeted with deafening *'Hochs,' 'Vivat Muenchhausen'* and *'Lang soll er leben.'* Then someone yelled for a speech, to which I responded, delivering an appropriate address for the occasion. I had hardly finished, when two ladders were leaned against my balcony and two enthused *'Corps Studenten'* had carried me bodily down into a gala automobile, bedecked gaily with bunting. One of the students, in full dress, took his seat at the steering wheel, while ten others, also in full dress, started to pull the automobile in a triumphant entry through the city.

"It was indeed a strange cortege, and you will find a full report of it in the German daily press of September the 30th, 1907. The town was decorated with flags from end to end in a most elaborate manner, and after a wonderful day, full of speeches and all kinds of honors bestowed upon me, the day was closed with a tremendous illumination and exquisite fireworks. The next few days were crowded with hundreds of interviews with reporters and with private individuals, while attention and kindness were showered over me unendingly. I tried hard to absorb all the new customs, and I had to ask numerous questions in order to become acquainted with all the strange things I met at every hand. As usual, my well-known versatility carried me through everything successfully, and it took me less than a week of concentrated study to become a fully-up-to-date man.

"There was only one point on which I remained obdurate. This was my attire. I refused to clothe myself in modern clothes. I refused to put my beloved lower extremities into those foolish, modern, overgrown sleeves which you call trousers, nor could I see a single good reason for wearing those unsightly sacks which you call coats. Neither did close-cropped hair, which destroys the individuality of man, appeal to me in the least, nor, for that matter, those fantastic straw-stalk dishes which you call straw hats. Accordingly I stuck to my style of dressing, although I confess I had considerable difficulty in finding a tailor and a hatter who could accommodate me.

"Alas! my triumph was short lived. I have already told you, that before I began my century-long sleep, I had committed a certain political offense against the then reigning authorities. You would naturally think that after a lapse of 100 years almost any kind of political offense would be forgotten and outlawed. Not so in my dear fatherland. In Germany, a political offense is worse than a thousand murders. Official Germany, or rather Prussia, knows no time limit when it concerns *lèse majesté*. To make a painful story short, one nice autumn morning, I was awakened roughly with this pleasant remark:

"'I arrest you in the name of the King.' Knowing me as a resourceful character, the authorities had sent no less than six well-armed *'Polizisten,'* to make sure I would not break away.

"I was forced to dress in a hurry, and before I knew it, I had been placed in the 'green wagon' and hustled to the local jail, there to await trial for my political wrongs, committed 110 years ago. So does Prussia treat its famous men! Lucky for me that I carried my money in the folds of my high boots, for if I had not, it certainly would have been found. So you see, ancient dress has its advantages.

"I stayed in that prison for two days, and I confess that I do not know what would have become of me had it not been for my many sympathizers and admirers. To the German people's fair-mindedness, distinguished from German officialdom, I owe my release. For at the end of two days, in the middle of the night, some 30 masked young men, all admirers of mine, rushed into the prison and overpowered the keepers and attendants, and I was put in a large automobile and rushed away in the dead of a moonless night. I was quickly conducted to a small town, where I lived in disguise for some weeks.

"Subsequently, I made my way to the Dutch frontier, where I breathed easier, for I knew that there I was safe from all danger. The next day found me in Paris where I settled down in one of the suburbs, with deep bitterness in my heart against official as well as officious Prussia.

"For the next few years, I traveled extensively in Europe and America, as well as the rest of the world (with the exception of Germany). In the course of my travels, I had a great many adventures, which I hope I will have the pleasure to relate to you in the near future. Returning to Paris in 1910, my mind, which had always been of a scientific bend, turned to the study of electricity and chemistry, as well as of general physics, and in a short time I had made hundreds of wonderful discoveries. Not believing in patents, especially in France, with her antiquated patent laws, I patented none of my inventions. Some day I hope to publish all of them for the benefit of humanity.

"THE outbreak of the great war of 1914 found me in the midst of the study of several new inventions which I was trying to perfect. Nevertheless, I welcomed the war, with a glad heart. Here at last was my long hoped for chance to get even with Prussia, against whom I had nursed a growing hatred during the past few years. My *'révanche'* was at hand.

"The war had not been in progress for two days when I received an urgent call from my friend President Poincaré, of the French Republic. I called at the palace at once and was greeted cordially by the President, who shook me warmly by the hand. Only one other person was present, namely, General Joffre, chief of the French army, whom I had known intimately for the past few years. He also welcomed

me and patted me affectionately on the back. I could see by the expression on their faces that some very serious business was to be transacted, and I was not mistaken.

"'*Monsieur le Baron,*' the President began in a businesslike manner, 'from our past acquaintance I know you to be on our side, despite the fact that you are born a Prussian. Am I correct in my assumption?'

"'Yes, *Monsieur le Président,*' I replied fervently, 'it was my misfortune to have been born in Prussia, but I assure you that there is to-day no more ardent, patriotic Frenchman in France than myself. Down with the tyrant Prussia!'

"'*Très bien,*' the President replied, gratified. 'I will have you sworn in at noon to-day. As I know that you have made certain far-reaching inventions, I trust that you will do your utmost to turn these to the benefit of our great Republic. Any assistance which you might require will be given to you by the Government, and you will co-operate with General Joffre to destroy the enemy.

"'The French General Staff has already decided to invade Germany, by way of Alsace, in order to regain our lost provinces. Your efforts, therefore, should be confined to that territory until your presence is required elsewhere.'

"I thanked the President profusely for his great confidence in me, and hastened to assure him that I would not rest till the enemy was destroyed. I made it a condition, however, that I should have the power of requisitioning anything, no matter what it might prove to be, if in my opinion it was essential to use at the front. This, President Poincaré promised gladly.

"'All the Government desires, just now,' he closed, 'are results and victories over the enemy. France is at your service.' With these words we shook hands solemnly and the President left me alone with General Joffre.

"For several hours Joffre and I discussed various phases of the war, and after I had thoroughly acquainted him with some of my revolutionary plans of warfare we parted in high spirits.

"That very night I requisitioned every tank of laughing gas, as well as every carboy of chloroform, in the whole of France. I furthermore ordered every factory producing these articles to work overtime for 24 hours each day until further notice; immediately thereupon, I requisitioned an immense factory at Levallois-Perret, a suburb of Paris, where for the next few days I kept 8,000 people busy manufacturing my requirements.

"You know, of course, of the French invasion into Alsace at the beginning of the war, and how we penetrated even beyond Mülhausen and Kolman. But did you know how it was accomplished, and by whom? I think not. When history is finally written you will find that it was I who made the difficult work possible. I personally conducted the invasion and it was, indeed, a brilliant success. The first clash with the Germans was spectacular. We rushed upon them in the early morning, but instead of our artillery using the ordinary explosive shells we used my compressed laughing gas cylinders. These were constructed in such a way that they would open upon striking the ground. The soldiers of the rank and file were equipped with a similar device, and, instead of shooting bullets, they shot compressed laughing gas cylinders. These cylinders were shot from the rifle at a rather close range and were not supposed to penetrate the bodies of the enemy. Instead, the cylinders had a short rubber nose which, upon striking, actuated a trigger, and this in turn opened the forward end of the cylinder, releasing the gas.

"Our first attack proved as great an astonishment to us as to the enemy. When we began shooting the laughing gas at the oncoming ferocious-looking Germans, their expressions changed suddenly to abominable grins. Most of them reeled and dropped right in their tracks; we had but to pick them up afterward, as prisoners. In a single day we thus captured 8,000 Germans.

"After the first rush, we drove them back to their second line of trenches, and it was here that my chloroform bombs did wonderful work. Our artillery began shelling the trenches with my bombs; these, on striking the ground, liberated the compressed chloroform with disastrous results to the enemy. We literally drenched the Germans with chloroform, and those who were not killed outright were picked up later to be sent to France as prisoners; there they were put to work at manufacturing more laughing gas and chloroform with which to capture their countrymen.

"Thus we fought our way to Mülhausen, which we soon occupied triumphantly. I have no doubt but that I would have fought my way across the Rhine, but just then Joffre got into trouble in Belgium and retreated into France. On his urgent representation, I rushed to his aid, leaving my Eastern army in the hands of a young General, whom I thought capable of continuing our Alsatian invasion.

"Unluckily, the Germans got wise to my bombs and began using some form of diving helmets, fastened over the heads, which kept the fumes and gases from their noses and mouths. This, of course, counteracted my bombs and made them obsolete. The Germans subsequently appeared in great force and practically drove my Alsatian invading army from Alsace, finally leaving it entrenched in the Vosges.

"In the meanwhile, General Joffre had retreated almost to Paris before I could rush assistance to him. I am proud to state here that had it not been for me, Paris, as well as the rest of France, would have been in German hands.

But Germany had not included Münchhausen in her plans of invasion.

"The great German General Von Kluck was but a few miles from Paris, when I went into action. Why he did not take Paris at that time and why he retreated so mysteriously and with so much haste beyond the rivers Marne and Somme has been a deep mystery to many people for a long time. The explanation is found in the one word; Münchhausen. I had long since discovered that the German advance could not be stopped by ordinary means, so I adopted extraordinary measures.

"As is well known, France had been poorly prepared for the war. While there were unlimited stores of powder and gun-cotton, the artillery was sadly deficient in shells and our soldiers lacked bullets. As the manufacture of these important items is rather slow work, I commandeered all the French arsenals to turn out immediately rock salt shells and cartridges, which, instead of having bullets at their business ends, were filled with a goodly charge of the inexpensive as well as plentiful rock salt.

"From the minute these 'Salties' (as they were affectionately called by the French army) came into

use, the German advance had come to an end. We simply shot salt at the Germans.

"You may laugh at this and ask how it could possibly have stopped them, but the answer is as simple as it is surprising. The rock salt, when shot from a rifle or gun, had not enough piercing power to penetrate the bodies of the enemy, but it went easily clean through the soldiers' uniforms and then buried itself under their skins.

"If you have ever had a salty solution applied to an open wound you will appreciate what happened when I began pumping rock salt into the Imperial German army. No sooner had a soldier been shot than he would throw up both hands and begin to scratch himself furiously, with a zeal with which you would hardly credit the slow-moving Germans. Orders or no orders from his officers, *Hans* would scratch himself for dear life to get some relief from the fearful itching. Finding that this did not bring the desired relief, instinct prompted him to run for the nearest water supply in order to wash the slight wounds free of the salt

"By that time, our gallant Frenchmen or British were upon them and they were made prisoners in less time than it takes to describe it. It was several days before the German General Staff got onto my latest device but then they promptly set out to checkmate me. One morning, I received a report that my rock salt charges no longer acted in the usual prescribed manner, i. e., the Germans refused to scratch themselves when shot at. Instead, they threatened to drive us back. That afternoon we caught a few Germans and the mystery was solved.

"The foxy German General Staff had ordered each soldier to wear TWO uniforms, one put on top of the other! Our rock salt charges could easily penetrate one uniform, but not two! Therefore I was forced to abandon my 'Salties,' and I turned my fertile brain in new directions.

"In a few days I was back to the front with a brand-new device. I am proud to say, that of all schemes, this one was probably the most effective. With its help, we captured no less than 31,986 Germans in less than one week. President Poincaré personally attached the cross of the *Légion d'honneur* to my breast, with the official thanks of the Republic. I am immensely proud of it to-day.

"As you will have noticed, all my own devices of modern warfare are exceedingly humane. If I can possibly avoid it, I do not allow blood to be shed. I believe in taking the enemy alive.

"My well-known success, the *Human Self-binder*, illustrates this point.

"You are, of course, acquainted with the self-binder as used in harvesting. You know how the machine bales the wheat, putting a stout cord around the circumference of the bundle, and holding the stalks securely together.

"This is the principle used in my *Human Self-binder*. It is simplicity itself and works as follows:

"Two of the famous French 75-millimeter guns were placed about 150 meters apart from each other, facing the oncoming enemy. The guns were loaded in the usual manner except that the shells were equipped with an eye-ring at the end facing the enemy. To this ring was fastened securely a strong but flexible steel cable about as thick as your little finger. Before firing, the cable would run into the mouth of the first cannon, while the other end of the cable was fastened to a simular shell in the second cannon 150 meters distant. Then the two guns were adjusted in such a manner that the cable was almost taut; the cannons themselves were leveled nearly parallel to the ground. When the command was given the two cannons were fired simultaneously by means of electricity. The result was fearful when we first tried it on a regiment of charging Germans. The two shells leaped forward together from the cannons, carrying the steel cable with them, now stretched taut. The cable, cutting through the air at a tremendous rate of speed, made a frightful, screeching noise. It 'sang' so loudly that it was easily heard over a distance of 35 miles. It was awe-inspiring.

"Have you ever, as a child, swung a cord with a stone at one end? If you have, you will remember how the string 'sung' louder and higher in pitch as you increased its speed. So it was with the steel cable, only the sound was increased a few billion times over that of your string. It went somewhat like this:

WHHEEEEEEEEE EEEE-EEE-EEE eeee-eee-eee-eee

"The two shells then plowed their way through a few dozen soldiers, while the cable, catching the foremost men amidships, as it were, was stopped short, and the shells, carried forward by their momentum, continued to travel in their forward movement until they were stopped short by the cable. But the momentum then carried one shell around to the left, while the other went to the right. In less than one second, over 500 men were baled together tighter than a bale of compressed cotton, and as hopeless Most of the men at the point of contact with the cable were, of course, crushed to death by the tremendous pressure, but those on the inside, while nearly all of the breath had left them for the time being, were alive and were easily made prisoners by us.

"You have probably often wondered why, after the retreat of the Marne, the Germans dug themselves into their famous trenches. The answer is that this was the only means of escape from my human baler. As soon as they had found that they could not rush at us over the open terrain, they went into their trenches, which naturally put my self-binder *hors de combat*, or out of business, as Americans are fond of saying.

"This put me at my wits' end—but not for very long. At the end of October, 1914, when all efforts to oust the Germans from their trenches had failed, I went to see General Joffre and said to him:

" 'My dear General, we must now resort to a more novel means than ever to crush the enemy. Here is my plan: The Allies are now spending untold millions each day and no headway is being made against the Germans. Why not take 20,000 picked men, who know how to dig and mine, and order them to build a few gigantic tunnels right under the German trenches, emerging in some forests miles behind the German lines? Upon a given signal, our armies could break through the openings and, while half of our men would fall into the enemy's back, the other half would be well on the road to Berlin! Simple, is it not?'

"General Joffre's enthusiasm over my plan knew no bounds. This otherwise silent man threw his arms around my neck and embraced me, while tears of gratitude ran down his ruddy cheeks We then discussed the details, and next morning we put the

whole plan before the Government. The President and his Cabinet, General Sir John French, of the British army, as well as King Albert, of the Belgian army, were even more enthusiastic than Joffre had been, and a vote was passed immediately authorizing me to go ahead with the work.

"So cautiously did we proceed, that no German spy ever got wind of the great scheme. No suspicious character was allowed to come within 10 miles of the tunnel openings and, as the latter were cunningly started under large railroad sheds, airplanes of the enemy never suspected what was going on beneath.

"There were four large tunnels all told. The first started at a point near Pont-à-Mousson, ending in the forest of La Fourasse. Another one started not far from Verdun and ended in the forest of the Argonne. No blasting or dynamite was used for fear of arousing the suspicions of the Germans overhead; each tunnel was large enough to enable 20 men to march abreast in it upright.

"At the end of December, 1914, we had over 150,000 men at work on the four tunnels, and by February 1, 1915, they were completed, except for a few yards at the far end. During that night, the entire French as well as British and Belgian armies walked into the tunnels—men, horses, automobiles, artillery and all. We had burned our bridges behind us; everything was staked on the *grand coup*.

"A small opening was then carefully made at the end of each tunnel, and one of our men cautiously emerged through each small hole. Each of the four reported the forests quiet, whereupon our sappers quickly broke out a large opening; within one hour our armies began to *débouche* from the tunnels, and by morning the four units had marched out of the four forests. One-half of the armies were to fall into the backs of the Germans and the other half were to march on Berlin. I was with the latter, highly elated at our success. We immediately seized all railways and roads, and our advance began.

"There was only one thing which disturbed us By night we were informed that the other half of our legions which were to fall into the back of the enemy had failed to find a single German soldier. Neither Joffre nor I could understand this, but the next morning we had the glad tidings that our army had taken some 40,000 prisoners and that not a single German remained Joffre and I naturally reasoned that the Germans had held their western trenches largely by bluff, while their real army, consisting of several million soldiers had been thrown against the Russians to hold the latter back from East Prussia and their new invasion of Hungary

"We therefore pressed forward with great speed, using Germany's wonderful strategic railroad system for the main advance.

"On February 5 our allied armies had crossed the Rhine at Cologne, Koblenz and Mayence. On February 10 we crossed the Weser, and on February 20 we entered Berlin triumphantly, without firing a shot. It was almost too good to be true, but more work lay ahead of us. Our mission was only half filled. We had not as yet conquered the main German and Austrian armies, which we knew to be on the eastern frontier, and no victory can be complete as long as a powerful army remains in the field. Accordingly we began pressing forward again, when we were dealt a most terrible blow.

"We received the awful intelligence from our army which we had left behind (in order to patrol the conquered territory) that one and one-half million Germans were rushing on us with forced marches *from France!*

"We were dumbfounded. Was it a trick or a hoax?

"Alas, it was neither. I will not bore you to death with a most unfortunate, heart-rending tale. This is what happened:

"Some German had hit upon the same idea as I had, but instead of boring four tunnels they bored two. That was the only difference! While we thought we emerged behind their backs, they thought they were doing the same thing in reference to us. By a strange coincidence they marched out of their tunnels during the same night that we marched out of ours *and, while we captured Berlin, they captured Paris and then Bordeaux!*

"Not finding our armies (which they thought had retreated into the interior), they feared a trick and rushed back till they came upon the other half of our army stationed along the Rhine. Then they knew the truth.

"A curious state of affairs had arisen in this terrible mix-up:

"We held Germany and a part of Austria, while the Germans held nearly all of France! Neither of us had gained any advantage, so we called a truce and agreed to trade back our present trenches for our former ones, while they agreed to take back theirs.

"For this reason March 1, 1915, found us in exactly the same position we had left on February 1, 1915, with the difference that for two days the Kaiser had been in Paris, while Joffre and I had been in Berlin!

"I immediately fell into disgrace with the Allies and I thought it best to take myself out of the way, which I did."

BARON MUNCHHAUSEN took a long breath at this juncture, so I commented:

"This is certainly a most remarkable story; but, my dear Baron, how is it possible that we have never heard a single word about this momentous phase of the war? No newspaper ever mentioned a word about it, to the best of my knowledge. How can you explain that?"

"My dear boy," Münchhausen replied wearily, "evidently you were not in Europe during the war. The explanation lies in the one word: Censorship! The Allies, while marching on Berlin, allowed no news to leave the country for fear that the German and Austrian armies at the Russian frontier would get it too early."

"But, your Excellency," I broke in, "how could that have helped you? While you advanced from town to town in Germany, the Germans certainly must have had plenty of time to send word ahead by telegraph to their armies at the Russian frontier that the Allies were advancing on Berlin. This doesn't look right, somehow."

Baron Munchhausen chuckled softly for some time before he replied:

"Ah, my boy, I knew you would ask this, so I kept it until the last. The failure of the Germans in the East to receive news of our invasion was entirely due to a brilliant ruse of mine, studied out long before our entry into Germany. Like all my successes, this one was the simplest of them all. Ridiculously simple! I must laugh every time I think of it!

"You see, when the Allies emerged from the for-

ests that night they were all of them, down to the last soldier, *attired in German uniforms!!*

"As large bodies of German soldiers were thrown back and forward over the great German railroad system so often during the war, no one thought anything of our invasion, thinking us Germans all the while; as a matter of fact, *over 80 per cent of the German population never knew that the Allies had invaded Germany and Austria until we were back in our own trenches in northern France and Flanders.*"

Here Münchhausen indulged in an uproarious laugh before he proceeded:

"The fortresses which we encountered had so few men that we did not even bother to take them. Had the defenders found out during our advance on Berlin that we were not their compatriots, they would have been powerless, as their numbers were pitifully small compared with the immense armies of the Allies. As we had naturally taken charge of all the telegraph and telephone lines immediately upon emerging from our forests, we sent fake war reports from Berlin all day long purporting to come from the front. The deception could not have been more complete. So you can readily see that all the 'news' which the Nauen wireless plant sent out broadcast each day over the entire world during the month of March, was nothing but a hoax, manufactured expressly for it by our own General Staff!"

I was so stunned by this revelation that I sat speechless for a few seconds. But I collected my thoughts suddenly, and demanded:

"That is all good and well as far as it goes, but what about the German army in France, my dear Baron? How could over a million Germans have taken Paris and Bordeaux without the outside world hearing about it?"

I thought surely that I had cornered Münchhausen that time, but he merely gave a deep sigh and said sadly:

"Alas, great minds always run in the same channels. That German who thought of digging the tunnels underneath our troops also thought of putting *his* soldiers *into French and British uniforms!*

"So, you see, the German masqueraded armies fooled the French population precisely in the same manner as I fooled the German people with mine. There are thousands of French even to-day who have not the slightest knowledge that Paris or Bordeaux had actually been in German hands!! Think it over, and you can reason out yourself how it worked . . ."

"And what did you do next, your Excellency?" I asked, more or less apologetically, for having doubted the Great Man's word.

"My last experience with the Allies having proved so humiliating to me, I did not wish to show my face in Europe any longer, so I decided to come to America, where I arrived in the middle of March. Having been in America previously, the country was not new to me; as a matter of fact, I had acquired a large estate on the south shore of Long Island some years before. I retired there and, having few friends in the neighborhood, I was able, shortly, to complete my inventions on which I had been experimenting in Paris before the war brought an abrupt termination to my work.

"The problems of gravity had long attracted me most powerfully. With Newton, the famous, I wondered what made an apple fall from a tree or a brick from a roof. Newton long ago, in his famous works, had told us the *why*, but he had died without knowing the *how*. He knew all the laws governing gravity, but he knew not what the force consisted of. He was very much like Edison, who knows a great deal about electricity and its laws, but who does not know what electricity itself consists of.

"It did not take me a long time to actually solve the mysteries of gravity, once I hit upon the right track. I found that gravity, like electricity, is a certain manifestation of the luminiferous ether which permeates the universe and all matter.

"Once I had solved the mystery, I set out immediately to find an insulator for gravity, and in a few days I had solved this problem in a masterful manner.

"To make myself plain: On earth all objects are attracted to the center of the earth by the force known as gravity. Whether it be a cannon ball or a feather, both will fall on the earth's surface if unsupported. If some means could be found to interpose between a falling apple and the earth a 'gravity' insulator, through which gravity could not act, the apple would stay suspended in mid-air, theoretically. It could not fall to the earth because there would no longer be any gravity to attract it.

"A parallel to the above is found in the following simple experiment: Take a steel ball and rest it on a smooth surface. Then take a strong horseshoe magnet. With it approach the steel ball; as soon as the magnet comes close enough, the ball will roll toward the magnet till it reaches it. Separate the two again and repeat the performance, but before the ball reaches the magnet interpose a magnetic 'insulator' between ball and magnet—in this instance a stout piece of sheet iron. The iron will take up all the magnetism and no magnetic flux will reach the ball. Consequently it will lie still, unaffected by the strong magnet, which is just as strong as ever, but is 'neutralized' by the piece of sheet iron.

"To go further: Before any form of energy can be transmitted from one point to the other, it *must* pass through a conducting medium. Take the medium away and the energy cannot be transmitted any longer. To illustrate:

"Take sound, for example—a simple form of energy. A bell rings. The sound waves generated from the bell's gong travel through the air till they strike your ear drum. You hear the bell. In this case the air is the conveying medium. Take the air away and you can no longer hear the bell. Thus when a bell is placed under a glass globe, you can still hear the bell. Now, with an air pump, exhaust the air from the globe; you can still see the clapper of the bell strike the gong furiously, but you cannot hear a single sound, because you have taken away the conducting medium, which is the air.

"To go a step further: You look at the sun, some 93,000,000 miles distant from you. You see its rays, you feel its heat. Thus the sun sends a colossal amount of energy down to earth as well as to the other planets. What is the necessary conducting medium here? The luminiferous ether, that mysterious fluid, so fine, so intangible that man has as yet neither seen, nor felt, nor weighed it. Nevertheless, we have long known of its existence. It fills the pores of the densest metal, as well as all space in the universe. There is no atom on earth or in the heavens which it does not permeate completely at all times.

"But, of course, this is all well known to you. I simply recite it so that the following may become plain to you:

"I take a glass tube five feet long, in which I place a piece of cork. Then I exhaust all the air from the tube. When I turn the tube upside down the cork will, of course, fall from the top of the tube to the bottom. Through what medium does the energy of gravity pass to reach the cork and force it to fall down? The ether. I now take my gravity insulator, place it between the tube and the earth and turn the tube upside down. What happens? The cork no longer falls down, but stays on top; furthermore, the entire tube, cork and all, 'floats' in the air when my hand releases it. Gravitational force cannot reach the tube. It is 'insulated,' the same as glass insulates electricity and prevents it from leaving its conducting wire.

"My gravity insulator is simply a curiously arranged wire netting of insulated *marconium* wires crossing each other at right angles. Marconium is a certain metal of the rubidium group, discovered by me; a netting of this wire, when excited with a powerful current of a peculiar wave and a frequency running into the millions, acts as a perfect insulator toward gravity BECAUSE IT NEUTRALIZES THE ETHER ABOVE AND BELOW IT. When placed above the ground, you can pile tons of metal or stone or any other material over it. It will not touch the gravity insulator unless you push it down on it by applying an external force. The material cannot drop on the insulator by its own weight because NOTHING HAS WEIGHT IN SPACE, WHERE THERE IS NO GRAVITY.

"To prove this axiom, I placed a spring scale over my gravity insulator. The scale stayed suspended, as soon as I took my hands away from it. Now I placed weights on top of the scale, starting with a one-pound weight. The scale registered no weight, even when I increased the weight to 100 pounds. Under normal conditions, my weights would have tipped the scales to 100 pounds. On top of the 'insulator' the 'weight' had vanished, the same as the sound of your bell will vanish, when you place it in a vacuum. In order that you will not draw any wrong conclusions, let me state explicitly that the *etherless zone is confined only to about one inch above and below the Marconium wire netting.* Thus any object placed above the 'insulator' is, of course, surrounded by ether, *else you could not see it.* But gravity on earth (unlike ether) acts only in a straight line, this line passing through the center of the earth.

"For this reason, objects placed above my 'insulator' will stay suspended only if placed directly above it. If a part of the object extends over the edge of the netting, the object will fall down on the netting, because gravity will pull down on the 'exposed' part of the object. In order to carry out these experiments successfully, it is quite necessary that the sun, as well as the moon, be quite below the earth's horizon. If this precaution is not taken, the object above the 'insulator' will be immediately attracted toward the sun or toward the moon unless another gravity insulator is placed *above* the object to neutralize the sun's or the moon's gravitational attraction.

"My invention completed, I immediately set to work toward building a machine which would enable me to leave the earth. I accordingly constructed a very strong steel globe about 60 feet in diameter, which was to take me out into space. My first planned excursion was to our nearest neighbor in space—the moon—which is only about 240,000 miles distant.

"The steel globe which was to take me to the moon had its entire outer surface covered with a double marconium netting, the free, insulated wire ends of the netting entering the globe, where they were connected to an elaborate switching arrangement. Running around the globe's circumference—its 'equator'—a wide belt or track was provided. This was the 'landing' track; on it the globe could readily roll over the ground without damaging the marconium wires underneath. This track was also made of marconium and was carefully insulated from the rest of the globe. The interior of the globe was well furnished for all comforts and had a powerful electric plant, similar in many respects to a modern submarine power plant.

"After having completed all arrangements, having stocked the machine with all kinds of provisions, fuel and many scientific instruments and apparatus, I made ready to leave old Mother Earth. The trip being extra hazardous, I took only one person along, an intimate friend of mine—Professor Hezekiah Flitternix, of Columbia University.

"The only other animate passengers of the expedition were Buster, my fox terrier, and Pee-Pix, the Professor's canary bird, which he refused to leave behind.

"The moon, being full and almost overhead, we entered my machine, which I had christened the evening before as *'The Interstellar.'* The heavy, soft, rubber-lined steel doors were screwed up airtight, in order that our air should not be drawn out after we got into the open space, and I started the generating apparatus. I switched on the marconium wires which covered the outer surface of the *'Interstellar,' which was turned toward the earth.*

The half of the netting turned toward the moon was not switched on.

"Through the glass portholes at the bottom of the machine, we could see the marconium wires glowing in their characteristic green glow. Immediately, we were lifted toward the moon overhead at a frightful speed. In less than 90 seconds, the entire American continent became visible, and in a few more seconds the earth in its true form, an immense globe, stood out against a pitch-black sky.

"As light cannot pass through an excited Marconium netting, it was necessary to switch off the current for a few seconds, every time we wished to see earth beneath us.

"The upper part of our machine (turned toward the moon) was now subjected to the moon's gravitational attraction—the earth, on account of the machine's other half being gravity-insulated, no longer attracting it. We were, therefore, 'falling' toward the moon at a constantly increasing speed and—"

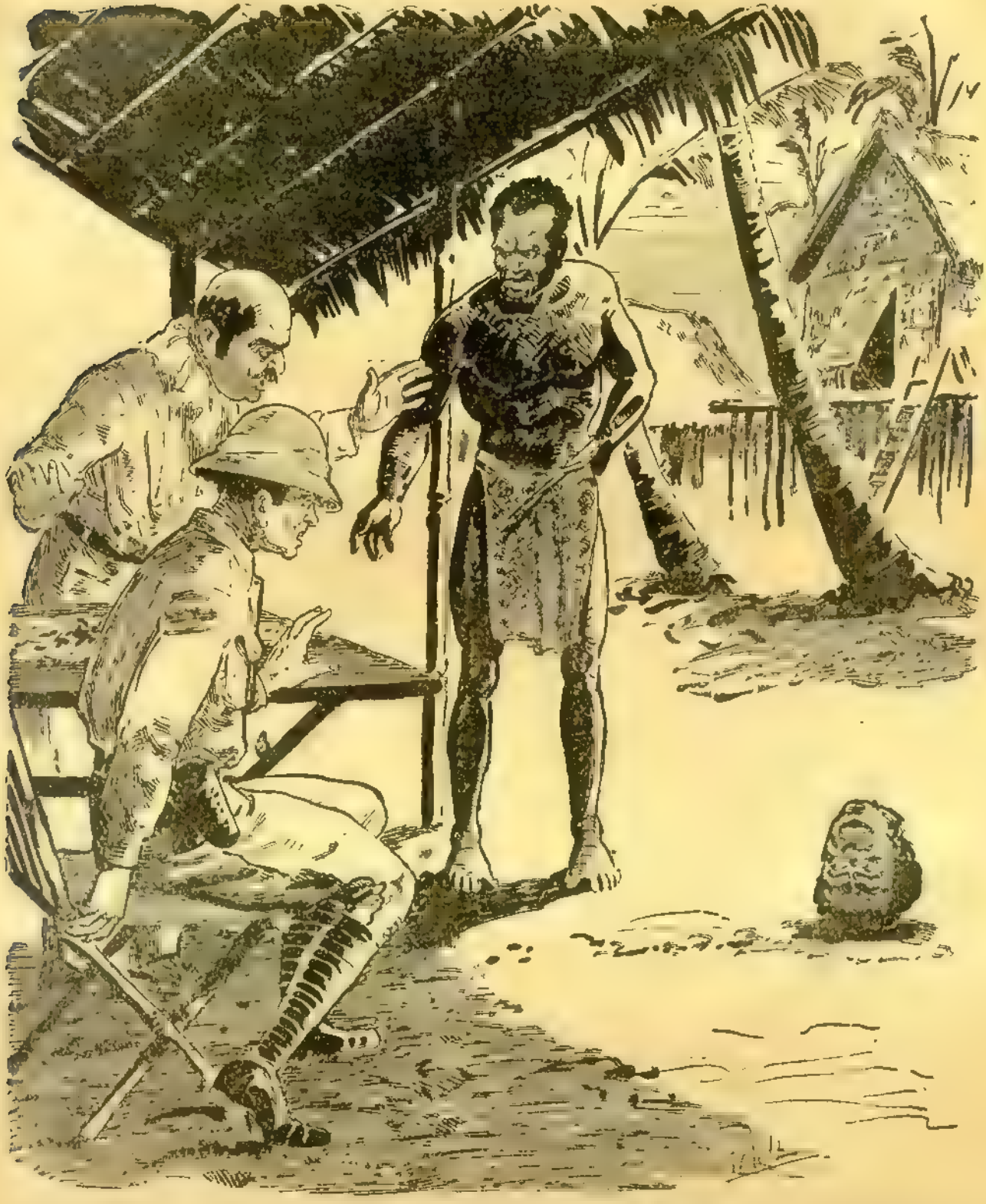
At this juncture I heard Münchhausen curse roundly and his voice became indistinct. I barely made out the words: "Power low—tomorrow, 11 P.M.—" then the peculiar screaming sound in my 'phones, running down the scale; the low click, then everything quiet. . . .

END OF INSTALLMENTS 1 AND 2

POLLOCK AND THE PORROH MAN

by H.G.Wells

Author of "The Time Machine," "A Story of the Stone Age," etc.



But he was not quick enough to prevent the man, who was anxious to get to Pollock's side of the bargain, from opening the cloth and throwing the head of the Porroh man upon the table. It bounded from there onto the floor, leaving a red trail on the cards, and rolled to the side, where it came to rest upside down, but glaring hard at Pollock.

IT was in a swampy village on the lagoon river behind the Turner Peninsula that Pollock's first encounter with the Porroh man occurred. The women of that country are famous for their good looks —they are Gallinas with a dash of European blood that dates from the days of Vasco de Gama and the English slave-traders, and the Porroh man, too, was possibly inspired by a faint Caucasian taint in his composition. (It's a curious thing to think that some of us may have distant cousins eating men on Sherboro Island or raiding with the Sofas.) At any rate, the Porroh man stabbed the woman to the heart, as though he had been a mere low-class Italian, and very narrowly missed Pollock. But Pollock, using his revolver to parry the lightning stab which was aimed at his deltoid muscle, sent the iron dagger flying, and, firing, hit the man in the hand.

He fired again and missed, knocking a sudden window out of the wall of the hut. The Porroh man stooped in the doorway, glancing under his arm at Pollock. Pollock caught a glimpse of his inverted face in the sunlight, and then the Englishman was alone, sick and trembling with the excitement of the affair, in the twilight of the place. It had all happened in less time than it takes to read about it.

The woman was quite dead, and having ascertained this, Pollock went to the entrance of the hut and looked out. Things outside were dazzling bright. Half a dozen of the porters of the expedition were standing up in a group near the green huts they occupied, and staring towards him, wondering what the shots might signify. Behind the little group of men was the broad stretch of black fetid mud by the river, a green carpet of rafts of papyrus and water-grass, and then the leaden water. The mangroves beyond the stream loomed indistinctly through the blue haze. There were no signs of excitement in the squat village, whose fence was just visible above the cane-grass.

Pollock came out of the hut cautiously and walked towards the river, looking over his shoulder at intervals. But the Porroh man had vanished. Pollock clutched his revolver nervously in his hand.

One of his men came to meet him, and as he came, pointed to the bushes behind the hut in which the Porroh man had disappeared. Pollock had an irritating persuasion of having made an absolute fool of himself; he felt bitter, savage, at the turn things had taken. At the same time, he would have to tell Waterhouse—the moral, exemplary, cautious Waterhouse—who would inevitably take the matter seriously. Pollock cursed bitterly at his luck, at Waterhouse, and especially at the West Coast of Africa. He felt consummately sick of the expedition. And in the back of his mind all the time was a speculative doubt where precisely within the visible horizon the Porroh man might be.

It is perhaps rather shocking, but he was not at all upset by the murder that had just happened. He had seen so much brutality during the last three months, so many dead women, burnt huts, drying skeletons, up the Kittam River in the wake of the Sofa cavalry, that his senses were blunted. What disturbed him was the persuasion that this business was only beginning.

He swore savagely at the black, who ventured to ask a question, and went on into the tent under the orange-trees where Waterhouse was lying, feeling exasperatingly like a boy going into the head master's study.

Waterhouse was still sleeping off the effects of his last dose of chlorodyne, and Pollock sat down on a packing-case beside him, and lighting his pipe, waited for him to awake. About him were scattered the pots and weapons Waterhouse had collected from the Mendi people, and which he had been repacking for the canoe voyage to Sulyma.

Presently Waterhouse woke up, and after judicial stretching, decided he was all right again. Pollock got him some tea. Over the tea the incidents of the afternoon were described by Pollock, after some preliminary beating about the bush. Waterhouse took the matter even more seriously than Pollock had anticipated. He did not simply disapprove, he scolded, he insulted.

"You're one of those infernal fools who think a black man isn't a human being," he said. "I can't be ill a day without you must get into some dirty scrape or other. This is the third time in a month that you have come crossways-on with a native, and this time you're in for it with a vengeance. Porroh, too! They're down upon you enough as it is, about that idol you wrote your silly name on. And they're the most vindictive devils on earth! You make a man ashamed of civilization. To think you come of a decent family! If ever I cumber myself up with a vicious, stupid young lout like you again—"

"Steady on, now," snarled Pollock, in the tone that always exasperated Waterhouse; "steady on."

At that Waterhouse became speechless. He jumped to his feet.

"Look here, Pollock," he said, after a struggle to control his breath. "You must go home. I won't have you any longer. I'm ill enough as it is through you—"

"Keep your hair on," said Pollock, staring in front of him. "I'm ready enough to go."

Waterhouse became calmer again. He sat down on the camp-stool. "Very well," he said. "I don't want a row, Pollock, you know, but it's confoundedly annoying to have one's plans put out by this kind of thing. I'll come to Sulyma with you, and see you safe aboard—"

"You needn't," said Pollock. "I can go alone. From here."

"Not far," said Waterhouse. "You don't understand this Porroh business."

"How should *I* know she belonged to a Porroh man?" said Pollock bitterly.

"Well, she did," said Waterhouse; "and you can't undo the thing. Go alone, indeed! I wonder what they'd do to you. You don't seem to understand that this Porroh hokey-pokey rules this country, is its law, religion, constitution, medicine, magic. . . . They appoint the chiefs. The Inquisition, at its best, couldn't hold a candle to these chaps. He will probably set Awajale, the chief here, on to us. It's lucky our porters are Mendis. We shall have to

HERE is an extraordinary story by Mr. Wells, which deals with the occult.

Many are the tales brought back from tropical sections of our earth, where the aborigines have often been recorded as being able to cast certain spells over their victims, hypnotic or otherwise. Mr. Wells has exploited this phase to a marked degree. This story, frankly, gives one the creeps, yet, holds one's interest to the end

shift this little settlement of ours. . . . Confound you, Pollock! And, of course, you must go and miss him."

He thought, and his thoughts seemed disagreeable. Presently he stood up and took his rifle. "I'd keep close for a bit, if I were you," he said, over his shoulder, as he went out. "I'm going out to see what I can find out about it."

Pollock remained sitting in the tent, meditating. "I was meant for a civilized life," he said to himself, regretfully, as he filled his pipe. "The sooner I get back to London or Paris the better for me."

His eye fell on the sealed case in which Waterhouse had put the featherless poisoned arrows they had bought in the Mendi country. "I wish I had hit the beggar somewhere vital," said Pollock viciously.

Waterhouse came back after a long interval. He was not communicative, though Pollock asked him questions enough. The Porroh man, it seems, was a prominent member of that mystical society. The village was interested, but not threatening. No doubt the witch-doctor had gone into the bush. He was a great witch-doctor. "Of course, he's up to something," said Waterhouse, and became silent.

"But what can he do?" asked Pollock, unheeded.

"I must get you out of this. There's something brewing, or things would not be so quiet," said Waterhouse, after a gap of silence. Pollock wanted to know what the brew might be. "Dancing in a circle of skulls," said Waterhouse; "brewing a stink in a copper pot." Pollock wanted particulars. Waterhouse was vague, Pollock pressing. At last Waterhouse lost his temper. "How the devil should *I* know?" he said to Pollock's twentieth inquiry what the Porroh man would do. "He tried to kill you off-hand in the hut. *Now*, I fancy he will try something more elaborate. But you'll see fast enough. I don't want to help unnerve you. It's probably all nonsense."

That night, as they were sitting at their fire, Pollock again tried to draw Waterhouse out on the subject of Porroh methods. "Better get to sleep," said Waterhouse, when Pollock's bent became apparent; "we start early to-morrow. You may want all your nerve about you."

"But what line will he take?"

"Can't say. They're versatile people. They know a lot of rum dodges. You'd better get that copper-devil, Shakespear, to talk."

There was a flash and a heavy bang out of the darkness behind the huts, and a clay bullet came whistling close to Pollock's head. This, at least, was crude enough. The blacks and half-breeds sitting and yarning round their own fire jumped up, and someone fired into the dark.

"Better go into one of the huts," said Waterhouse quietly, still sitting unmoved.

Pollock stood up by the fire and drew his revolver. Fighting, at least, he was not afraid of. But a man in the dark is in the best of armor. Realizing the wisdom of Waterhouse's advice, Pollock went into the tent and lay down there.

WHAT little sleep he had was disturbed by dreams, variegated dreams, but chiefly of the Porroh man's face, upside down, as he went out of the hut, and looked up under his arm It was odd that this transitory impression should have stuck so firmly in Pollock's memory. Moreover, he was troubled by queer pains in his limbs.

In the white haze of the early morning, as they were loading the canoes, a barbed arrow suddenly appeared quivering in the ground close to Pollock's foot. The boys made a perfunctory effort to clear out the thicket, but it led to no capture.

After these two occurrences, there was a disposition on the part of the expedition to leave Pollock to himself, and Pollock became, for the first time in his life, anxious to mingle with blacks. Waterhouse took one canoe, and Pollock, in spite of a friendly desire to chat with Waterhouse, had to take the other. He was left all alone in the front part of the canoe, and he had the greatest trouble to make the men—who did not love him—keep to the middle of the river, a clear hundred yards or more from either shore. However, he made Shakespear, the Freetown half-breed, come up to his own end of the canoe and tell him about Porroh, which Shakespear, failing in his attempts to leave Pollock alone, presently did with considerable freedom and gusto.

The day passed. The canoe glided swiftly along the ribbon of lagoon water, between the drift of water-figs, fallen trees, papyrus, and palm-wine palms, and with the dark mangrove swamp to the left, through which one could hear now and then the roar of the Atlantic surf. Shakespear told in his soft, blurred English of how the Porroh could cast spells; how men withered up under their malice; how they could send dreams and devils; how they tormented and killed the sons of Ijibu; how they kidnapped a white trader from Sulyma who had maltreated one of the sect, and how his body looked when it was found. And Pollock, after each narrative, cursed under his breath at the want of missionary enterprise that allowed such things to be, and at the inert British Government that ruled over this dark heathendom of Sierra Leone. In the evening they came to the Kasi Lake, and sent a score of crocodiles lumbering off the island on which the expedition camped for the night.

The next day they reached Sulyma, and smelt the sea breeze, but Pollock had to put up there for five days before he could get on to Freetown. Waterhouse, considering him to be comparatively safe here, and within the pale of Freetown influence, left him and went back with the expedition to Gbemma, and Pollock became very friendly with Perera, the only resident white trader at Sulyma—so friendly, indeed, that he went about with him everywhere. Perera was a little Portuguese Jew, who had lived in England, and he appreciated the Englishman's friendliness as a great compliment.

For two days nothing happened out of the ordinary; for the most part Pollock and Perera played Nap—the only game they had in common—and Pollock got into debt. Then, on the second evening, Pollock had a disagreeable intimation of the arrival of the Porroh man in Sulyma by getting a flesh-wound in the shoulder from a lump of filed iron. It was a long shot, and the missile had nearly spent its force when it hit him. Still, it conveyed its message plainly enough. Pollock sat up in his hammock, revolver in hand, all that night, and next morning confided, to some extent, in the Anglo-Portuguese.

Perera took the matter seriously. He knew the local customs pretty thoroughly "It is a personal question, you must know. It is revenge. And, of

course, he is hurried by your leaving de country. None of de natives or half-breeds will interfere wid him very much—unless you make it wort deir while. If you come upon him suddenly, you might shoot him. But den he might shoot you.

"Den dere's dis—infernal magic," said Perera "Of course, I don't believe in it—superstition—but still it's not nice to tink dat wherever you are, dere is a black man, who spends a moonlight night now and den a-dancing about a fire to send you bad dreams. . . . Had any bad dreams?"

"Rather," said Pollock. "I keep on seeing the beggar's head upside down grinning at me and showing all his teeth as he did in the hut, and coming close up to me, and then going ever so far off, and coming back. It's nothing to be afraid of, but somehow it simply paralyzes me with terror in my sleep. Queer things—dreams. I know it's a dream all the time, and I can't wake up from it."

"It's probably only fancy," said Perera. "Den my niggers say Porroh men can send snakes. Seen any snakes lately?"

"Only one. I killed him this morning, on the floor near my hammock. Almost trod on him as I got up."

"*Ah!*" said Perera, and then, reassuringly, "Of course it is a—coincidence. Still, I would keep my eyes open. Den dere's pains in de bones."

"I thought they were due to miasma," said Pollock.

"Probably dey are. When did dey begin?"

Then Pollock remembered that he first noticed them the night after the fight in the hut. "It's my opinion he don't want to kill you," said Perera—"at least not yet. I've heard deir idea is to scare and worry a man wid deir spells, and narrow misses, and rheumatic pains, and bad dreams, and all dat, until he's sick of life. Of course, it's all talk, you know. You mustn't worry about it. . . . But I wonder what he'll be up to next."

"*I* shall have to be up to something first," said Pollock, staring gloomily at the greasy cards that Perera was putting on the table. "It don't suit my dignity to be followed about, and shot at, and blighted in this way. I wonder if Porroh hokey-pokey upsets your luck at cards."

He looked at Perera suspiciously.

"Very likely it does," said Perera warmly, shuffling. "Dey are wonderful people."

That afternoon Pollock killed two snakes in his hammock, and there was also an extraordinary increase in the number of red ants that swarmed over the place; and these annoyances put him in a fit temper to talk over business with a certain Mendi rough he had interviewed before. The Mendi rough showed Pollock a little iron dagger, and demonstrated where one struck in the neck, in a way that made Pollock shiver, and in return for certain considerations Pollock promised him a double-barrelled gun with an ornamental lock

In the evening, as Pollock and Perera were playing cards, the Mendi rough came in through the doorway carrying something in a blood-soaked piece of native cloth.

"Not here!" said Pollock very hurriedly. "Not here!"

But he was not quick enough to prevent the man, who was anxious to get to Pollock's side of the bargain, from opening the cloth and throwing the head of the Porroh man upon the table. It bounded from there on to the floor, leaving a red trail on the cards, and rolled into a corner, where it came to rest upside down, but glaring hard at Pollock.

Perera jumped up as the thing fell among the cards, and began in his excitement to gabble in Portuguese. The Mendi was bowing, with the red cloth in his hand. "De gun!" he said. Pollock stared back at the head in the corner. It bore exactly the expression it had in his dreams. Something seemed to snap in his own brain as he looked at it.

Then Perera found his English again.

"You got him killed?" he said. "You did not kill him yourself?"

"Why should I?" said Pollock.

"But he will not be able to take it off now!"

"Take *what* off?" said Pollock

"And all dese cards are spoiled!"

"*What* do you mean by taking off?" said Pollock.

"You must send me a new pack from Freetown. You can buy dem dere."

"But—'take it off?'"

"It is only superstition. I forgot. De niggers say dat if de witches—he was a witch— But it is rubbish. . . . You must make de Porroh man take it off, or kill him yourself. . . . It is very silly."

Pollock swore under his breath, still staring hard at the head in the corner.

"I can't stand that glare," he said. Then suddenly he rushed at the thing and kicked it. It rolled some yards or so, and came to rest in the same position as before, upside down, and looking at him.

"He is ugly," said the Anglo-Portuguese. "Very ugly. Dey do it on deir faces with little knives."

Pollock would have kicked the head again, but the Mendi man touched him on the arm. "De gun?" he said, looking nervously at the head.

"Two—if you will take that beastly thing away," said Pollock.

The Mendi shook his head, and intimated that he only wanted one gun now due to him, and for which he would be obliged. Pollock found neither cajolery nor bullying any good with him. Perera had a gun to sell (at a profit of three hundred per cent), and with that the man presently departed. Then Pollock's eyes, against his will, were recalled to the thing on the floor.

"It is funny dat his head keeps upside down," said Perera, with an uneasy laugh. "His brains must be heavy, like de weight in de little images one sees dat keep always upright wid lead in dem. You will take him wiv you when you go presently. You might take him now. De cards are all spoilt. Dere is a man sell dem in Freetown. De room is in a filthy mess as it is. You should have killed him yourself."

POLLOCK pulled himself together, and went and picked up the head. He would hang it up by the lamp-hook in the middle of the ceiling of his room, and dig a grave for it at once. He was under the impression that he hung it up by the hair, but that must have been wrong, for when he returned for it, it was hanging by the neck upside down.

He buried it before sunset on the north side of the shed he occupied, so that he should not have to pass the grave after dark when he was returning from Perera's. He killed two snakes before he went to sleep. In the darkest part of the night he awoke with a start, and heard a pattering sound and something scraping on the floor. He sat up noiselessly, and felt under his pillow for his revolver. A mum-

bling growl followed, and Pollock fired at the sound. There was a yelp, and something dark passed for a moment across the hazy blue of the doorway. "A dog!" said Pollock, lying down again.

In the early dawn he awoke again with a peculiar sense of unrest. The vague pain in his bones had returned. For some time he lay watching the red ants that were swarming over the ceiling, and then, as the light grew brighter, he looked over the edge of his hammock and saw something dark on the floor. He gave such a violent start that the hammock overset and flung him out.

He found himself lying, perhaps, a yard away from the head of the Porroh man. It had been disinterred by the dog, and the nose was grievously battered. Ants and flies swarmed over it. By an odd coincidence, it was still upside down, and with the same diabolical expression in the inverted eyes.

Pollock sat paralyzed, and stared at the horror for some time. Then he got up and walked round it—giving it a wide berth—and out of the shed. The clear light of the sunrise, the living stir of vegetation before the breath of the dying land-breeze, and the empty grave with the marks of the dog's paws, lightened the weight upon his mind a little.

He told Perera of the business as though it was a jest—a jest to be told with white lips. "You should not have frighten de dog," said Perera, with poorly simulated hilarity.

The next two days, until the steamer came, were spent by Pollock in making a more effectual disposition of his possession. Overcoming his aversion to handling the thing, he went down to the river mouth and threw it into the sea-water, but by some miracle it escaped the crocodiles, and was cast up by the tide on the mud a little way up the river, to be found by an intelligent Arab half-breed, and offered for sale to Pollock and Perera as a curiosity, just on the edge of night. The native hung about in the brief twilight, making lower and lower offers, and at last, getting scared in some way by the evident dread these wise white men had for the thing, went off, and, passing Pollock's shed, threw his burden in there for Pollock to discover in the morning.

At this Pollock got into a kind of frenzy. He would burn the thing. He went out straightway into the dawn, and had constructed a big pyre of brushwood before the heat of the day. He was interrupted by the hooter of the little paddle steamer from Monrovia to Bathurst, which was coming through the gap in the bar. "Thank heaven!" said Pollock, with infinite piety, when the meaning of the sound dawned upon him. With trembling hands he lit his pile of wood hastily, threw the head upon it, and went away to pack his portmanteau and make his adieus to Perera.

That afternoon, with a sense of infinite relief, Pollock watched the flat swampy foreshore of the Sulyma grow small in the distance. The gap in the long line of white surge became narrower and narrower. It seemed to be closing in and cutting him off from his trouble. The feeling of dread and worry began to slip from him bit by bit. At Sulyma belief in Porroh malignity and Porroh magic had been in the air, his sense of Porroh had been vast, pervading, threatening, dreadful.

Now manifestly the domain of Porroh was only a little place, a little black band between the sea and the blue cloudy Mendi uplands.

"Good-bye, Porroh!" said Pollock. "Good-bye—certainly not *au revoir*."

The captain of the steamer came and leant over the rail beside him, and wished him good-evening, and spat at the froth of the wake in token of friendly ease.

"I picked up a rummy curio on the beach this go," said the captain. "It's a thing I never saw done this side of Indy before."

"What might that be?" said Pollock.

"Pickled 'ed," said the captain.

"What?" said Pollock.

"'Ed—smoked. 'Ed of one of these Porroh chaps, all ornamented with knife-cuts. Why! What's up? Nothing? I shouldn't have took you for a nervous chap. Green in the face. By gosh! you're a bad sailor. All right, eh? Lord, how funny you went! . . . Well, this 'ed I was telling you of is a bit rum in a way. I've got it, along with some snakes, in a jar of spirit in my cabin what I keeps for such curios, and I'm hanged if it don't float upsy down. Hallo!"

Pollock had given an incoherent cry, and had his hands in his hair. He ran towards the paddle-boxes with a half-formed idea of jumping into the sea, and then he realized his position and turned back towards the captain.

"Here!" said the captain. "Jack Philips, just keep him off me! Stand off! No nearer, mister! What's the matter with you? Are you mad?"

Pollock put his hand to his head. It was no good explaining. "I believe I am pretty nearly mad at times," he said. "It's a pain I have here. Comes suddenly. You'll excuse me, I hope."

He was white and in a perspiration. He saw suddenly very clearly all the danger he ran of having his sanity doubted. He forced himself to restore the captain's confidence, by answering his sympathetic inquiries, noting his suggestions, even trying a spoonful of neat brandy in his cheek, and, that matter settled, asking a number of questions about the captain's private trade in curiosities. The captain described the head in detail. All the while Pollock was struggling to keep under a preposterous persuasion that the ship was as transparent as glass, and that he could distinctly see the inverted face looking at him from the cabin beneath his feet.

Pollock had a worse time almost on the steamer than he had at Sulyma. All day he had to control himself, in spite of his intense perception of the imminent presence of that horrible head that was overshadowing his mind. At night his old nightmare returned, until, with a violent effort, he would force himself awake, rigid with the horror of it, and with the ghost of a hoarse scream in his throat.

He left the actual head behind at Bathurst, where he changed ship for Teneriffe, but not his dreams nor the dull ache in his bones. At Teneriffe, Pollock transferred to a Cape liner, but the head followed him. He gambled, he tried chess, he even read books, but he knew the danger of drink. Yet whenever a round black shadow, a round black object came into his range, there he looked for the head, and—saw it. He knew clearly enough that his imagination was growing traitor to him, and yet at times it seemed the ship he sailed in, his fellow-passengers, the sailors, the wide sea, was all part of a filmy phantasmagoria that hung, scarcely veiling it, between him and a horrible real world. Then the Porroh man, thrusting his diabolical face through

that curtain, was the one real and undeniable thing At that he would get up and touch things, taste something, gnaw something, burn his hand with a match, or run a needle into himself.

SO, struggling grimly and silently with his excited imagination, Pollock reached England. He landed at Southampton, and went on straight from Waterloo* to his banker's in Cornhill in a cab. There he transacted some business with the manager in a private room, and all the while the head hung like an ornament under the black marble mantel and dripped upon the fender. He could hear the drops fall, and see the red on the fender.

"A pretty fern," said the manager, following his eyes. "But it makes the fender rusty."

"Very," said Pollock; "a *very* pretty fern. And that reminds me. Can you recommend me a physician for mind troubles? I've got a little—what is it?—hallucination."

The head laughed savagely, wildly. Pollock was surprised the manager did not notice it. But the manager only stared at his face.

With the address of a doctor, Pollock presently emerged in Cornhill. There was no cab in sight, and so he went on down to the western end of the street, and essayed the crossing opposite the Mansion House. The crossing is hardly easy even for the expert Londoner; cabs, vans, carriages, mail-carts, omnibuses go by in one incessant stream; to any one fresh from the malarious solitudes of Sierra Leone it is a boiling, maddening confusion. But when an inverted head suddenly comes bouncing, like an india rubber ball, between your legs, leaving distinct smears of blood every time it touches the ground, you can scarcely hope to avoid an accident. Pollock lifted his feet convulsively to avoid it, and then kicked at the thing furiously. Then something hit him violently in the back, and a hot pain ran up his arm.

He had been hit by the pole of an omnibus, and three fingers of his left hand were smashed by the hoof of one of the horses—the very fingers, as it happened, that he shot from the Porroh man. They pulled him out from between the horses' legs, and found the address of the physician in his crushed hand.

For a couple of days Pollock's sensations were full of the sweet, pungent smell of chloroform, of painful operations that caused him no pain, of lying still and being given food and drink. Then he had a slight fever, and was very thirsty, and his old nightmare came back. It was only when it returned, that he noticed it had left him for a day.

"If my skull had been smashed instead of my fingers, it might have gone altogether," said Pollock, staring thoughtfully at the dark cushion that had taken on for the time the shape of the head.

Pollock at the first opportunity told the physician of his mind trouble. He knew clearly that he must go mad unless something should intervene to save him. He explained that he had witnessed a decapitation in Dahomey, and was haunted by one of the heads. Naturally, he did not care to state the actual facts. The physician looked grave.

Presently he spoke hesitatingly. "As a child, did you get very much religious training?"

"Very little," said Pollock.

A shade passed over the physician's face. "I don't know if you have heard of the miraculous cures—it may be, of course, they are not miraculous—at Lourdes."

"Faith-healing will hardly suit me, I am afraid," said Pollock, with his eye on the dark cushion.

The head distorted its scarred features in an abominable grimace. The physician went upon a new track. "It's all imagination," he said, speaking with sudden briskness. "A fair case of faith-healing, anyhow. Your nervous system has run down, you're in that twilight state of health when the bogles come easiest. The strong impression was too much for you. I must make you up a little mixture that will strengthen your nervous system—especially your brain. And you must take exercise."

"I'm no good for faith-healing," said Pollock.

"And therefore we must restore tone. Go in search of stimulating air—Scotland, Norway, the Alps—"

"Jericho, if you like," said Pollock—"where Naaman went."

However, so soon as his fingers would let him, Pollock made a gallant attempt to follow out the doctor's suggestion. It was now November. He tried football, but to Pollock the game consisted in kicking a furious inverted head about a field. He was no good at the game. He kicked blindly, with a kind of horror, and when they put him back into goal, and the ball came swooping down upon him, he suddenly yelled and got out of its way. The discreditable stories that had driven him from England to wander in the tropics shut him off from any but men's society, and now his increasingly strange behavior made even his man friends avoid him. The thing was no longer a thing of the eye merely; it gibbered at him, spoke to him. A horrible fear came upon him that presently, when he took hold of the apparition, it would no longer become some mere article of furniture, but would *feel* like a real dissevered head. Alone, he would curse at the thing, defy it, entreat it; once or twice, in spite of his grim self-control, he addressed it in the presence of others. He felt the growing suspicion in the eyes of his landlady, the servant, his man.

One day, early in December, his cousin Arnold—his next of kin—came to see him and draw him out, and watch his sunken yellow face with narrow eager eyes. And it seemed to Pollock that the hat his cousin carried in his hand was no hat at all, but a Gorgon head that glared at him upside down, and fought with its eyes against his reason. However, he was still resolute to see the matter out. He got a bicycle, and, riding over the frosty road from Wandsworth to Kingston, found the thing rolling along at his side, and leaving a dark trail behind it. He set his teeth and rode faster. Then suddenly, as he came down the hill towards Richmond Park, the apparition rolled in front of him and under his wheel, so quickly that he had no time for thought, and, turning quickly to avoid it, was flung violently against a heap of stones and broke his left wrist.

The end came on Christmas morning. All night he had been in a fever, the bandages encircling his wrist like a band of fire, his dreams more vivid and terrible than ever. In the cold, colorless, uncertain light that came before the sunrise, he sat up in his bed, and saw the head upon the bracket in the place of the bronze jar that had stood there overnight.

"I know that is a bronze jar," he said, with a chill

(*Continued on page* 1105)

* One of the great London railroad termini.

FOUR DIMENSIONAL SURGERY

by Bob Olsen

Author of "The Four-Dimensional Roller-Press"

As I grasped it [illegible] holding the light fixture gave way and with a jerk that almost pulled my arm out of its socket [illegible] Mayer looked into view. His left arm, except for a small part close to his shoulder, was still invisible, however.

SOMEONE said that "Fame is a fickle jade." She certainly has been inconstant to me, judging from the events that occurred subsequent to the mysterious disappearance of William James Sidelburg and his four dimensional roller press, which I helped him build.

Though I was fully exonerated from all blame in connection with the tragedy, the enormous amount of publicity I received as a result of it proved almost as disastrous to me as the fabled "golden touch" of King Midas was to him.

When Sidelburg vanished, so did my job, and I had a dickens of a time landing another. Wherever I applied, I found that the story of how I had assisted the precocious young mathematician to build a machine which had expanded his body to enormous proportions causing him to drift away like a balloon, had preceded me.

I answered countless advertisements for work I knew I could do well, only to be turned down the instant I gave my name. I finally managed to eke out a few dollars by writing articles and stories for scientific magazines, but my income from this source was small and uncertain.

When I had almost reached the point of worrying over how I was to pay my small weekly bill at the cheap boarding house where I had been living, I was surprised one morning by distinguished visitors.

As I sat writing in my tiny bedroom, the boarding mistress brought a card to me. I could hardly believe my eyes when I read:

PAUL J. MAYER, M.D.
Mayer Brothers' Clinic
Winchester, Wisconsin

Who has not heard of Doctor Paul Mayer, head of the Mayer Brothers' Clinic, famous the world over for marvelous feats of surgical skill?

"Show him up at once," I shouted to the landlady.

"And how about the other gentleman? she stammered stupidly.

"The other gentleman? Is there more than one?"

"Yes, but he didn't give his name."

"Well, for Heaven's sake, show them both up. And if there are any more, let them come too. But hurry, please! You mustn't keep them waiting."

When Doctor Mayer and his companion appeared, I was again astounded. Before he could start an introduction, I reached out my hand and said, "Professor Banning is already well known to me. He probably doesn't remember me, but I studied calculus under him three years ago."

"Oh, yes, I remember you very well," rejoined the professor, though I suspected that he said this merely out of politeness. "And, since I know you, permit me to present you to Doctor Paul Mayer."

"I certainly appreciate the honor of this visit," I said, in all sincerity. "Professor, please be seated in that rocker. Doctor, you take the chair. I'll sit on the bed."

If you happen to be a mathematician, the name of Professor Banning will be just as familiar to you as that of Doctor Mayer. In their respective fields, both men are at the top of the ladder. Professor Banning has several mathematical accomplishments to his credit, which have made him internationally famous. He is best known as an authority on non-Euclidian geometry and on the fourth dimension, in which branches of mathematics he stands supreme.

Among laymen, William James Sidelburg was perhaps the best known exponent of the fourth dimension, due largely, without doubt, to the publicity he had received because of his youth and precocity.

Professor Banning, on the other hand, was little known except among mathematical scholars. He had begun the study of the fourth dimension long before Sidelburg was born and had succeeded in working out formulas and constructing models of four dimensional objects far ahead of anything that had been accomplished up to that time.

You can imagine how insignificant and how embarrassed I felt as I entertained these two distinguished personages in my poorly furnished, tiny bedroom.

Doctor Mayer started the interview with, "I understand that you are the originator of the four dimensional roller press."

"Hardly the originator," I hastened to correct him. "The idea was conceived entirely by Mr. Sidelburg. I was merely his assistant. He hired me to work out the mechanical details of his invention."

"So much the better. If you could do that for one mathematician, it ought to be equally easy for you to do it for another. Am I not right?"

"I suppose so," I stammered, hardly knowing what he was driving at.

"Well, that's what we came to see you about. You may be interested in learning that the immediate cause of our arriving at a very momentous decision was a phrase in your story, THE FOUR DIMENSIONAL ROLLER PRESS, which appeared recently in a well known magazine. You quoted Sidelburg as saying that if it were possible to move in a fourth dimension, a doctor could remove an appendix without cutting the patient's skin."

"That's true. He did say something of that sort," I responded.

"And, according to Professor Banning, it is entirely possible. But perhaps I'd better let him tell the rest of the story himself."

Thus the professor picked up the conversation: "A few days ago, I took a trip to Winchester and placed myself under Doctor Mayer's care. For some time I have been troubled with gall-stones, and I was told that if anyone could help me it would be the Mayer Brothers. After examining me, they advised against an operation. They said that because of my advanced age and the weakened condition of my heart there was not one chance in a hundred that I would survive a major operation of the ordinary sort. It was then that I showed Doctor Mayer the passage in your story which he has just mentioned. After giving him a brief explanation of the theory of hyper-space, I asked him if such an

HERE the author of the "Four Dimensional Roller Press" comes back, eclipsing his former story not a little. This writer seems to have the knack of telling a four dimensional story that can be understood even by those who are not mathematicians or dyed-in-the-wool scientists. We always wanted to know what would happen to us if we could actually be turned into the fourth dimension. Our author sets forth some excellent ideas along this line, and we know that you will be highly interested and entertained by this unusual tale.

operation would be possible from a medical standpoint, providing the mathematical and mechanical features could be worked out successfully.

"He assured me that if I could provide him with instruments having four dimensional extension and capable of motion in the direction of the fourth dimension, he could perform even the most complicated operations without the necessity of cutting the skin of the person operated on. Naturally, the thing that interests me most right now is the possibility of having my gall-stones removed without the shock and dangerous strain that would result from an ordinary operation. They have been giving me a lot of trouble lately, and one of these days they will kill me. My life would probably be prolonged a great many years if I could get rid of them. This would enable me to devote myself to perfecting a complete set of four dimensional surgical instruments, which should be the means of saving untold pain and hardships to afflicted humanity.

"The reason we have come to you is that both Doctor Mayer and I are entirely lacking in mechanical skill. You, on the other hand, are an expert mechanic. Still more important, you have the inestimable advantage of being the only person we know of who has actually constructed a four dimensional object. For these reasons, we are asking you to help us make some four dimensional surgical instruments. Will you do it?"

"I hardly know what to say," I faltered. "Naturally, I know a little about the fourth dimension, but what you have just told me is away beyond me."

"Perhaps I'd better explain it more in detail."

"I wish you would."

"The best way to get a clear conception of the possibilities of hyper-space is by analogy, as, for example by comparing the characteristics of three dimensional objects with the limitations of other hypothetical inhabitants of space having but two dimensions—or even only one dimension.

"Imagine a creature like a very thin worm, so thin, in fact that it might be considered as having neither width nor thickness, but only length. This would be a one dimensional being, sometimes called a Unodim. It could move ahead in a straight line and could back up along the same line, but would be absolutely incapable of moving either to the right or left, or up or down. To imprison such an animal, you need only put a grain of sand in front of it and another behind it and it could not move either around or over them.

"Now, suppose we add another dimension, namely width. We now have a being of two dimensions—a Duodim or Flatlander—whichever nomenclature you prefer. About the nearest approach to such a creature in nature would be a very flat flounder or turtle. But while a turtle has a very appreciable amount of height, the imaginary inhabitant of 'Flatland' would be thinner than the finest tissue paper or gold leaf.

"The movements of such a creature would be confined to a single plane. It could move forward and backward, to the right and left, but it could not move either up or down. In order to confine it, you need merely to enclose it in a circle drawn with a lead pencil and the Flatlander could not get out of the circle unless he were able to break a hole in the ring by removing some of the graphite.

"Suppose there were two such creatures inside the circle, and suppose a three dimensional being like yourself should pick up one of them, move it through the third dimension and place it outside the circle. To the other Duodim, its companion would seem to vanish in an inexplicable manner. If he were able to break through the pencil mark and discover the other Flatlander outside, he would be completely baffled to explain how he managed to get there.

"Assuming that there is such a thing as a four dimensional being, it would be just as easy for it to lift you out of this room without opening a door or window as it would be for you to lift the Duodim over a pencil mark. Of course, there are no such creatures, but the possibility of our being able to accomplish similar miracles by means of mechanical contrivances is entirely feasible.

"Let us return to Flatland, where all objects have but two dimensions. Theoretically, we can easily conceive of such objects, yet in actuality no such things could possibly exist."

"Pardon me, Professor," I interrupted, "but I think I can give you an example of a familiar object which has only two dimensions. I remember hearing a radio lecture given by a famous editor and scientific writer, who likened a two dimensional object to a shadow. Obviously, a shadow has length and width but no thickness."

"That's a good illustration," Professor Banning rejoined, "but I think your scientific lecturer would not have used the term 'shadow' but rather 'projection of a shadow.' The word 'shadow' applies to all the space from which the light is cut off by a given object, and though intangible, it certainly has three dimensions. I'm glad you gave me that analogy, however, because it illustrates admirably the point I want to make.

"Let us consider the shadow cast by a silver dollar. Suppose the beams of light are parallel to each other and are perpendicular to the dollar and to a perfectly flat wall on which the shadow is cast. The projection of the shadow on the wall will be a circle and will have only two dimensions, but the shadow itself will be cylindrical in shape, with the surface of the dollar as one base, the projection on the wall as the other base, and with an altitude equal to the distance from the dollar to the wall.

"If you place a piece of flat cardboard, parallel to the dollar, anywhere between it and the wall, a two dimensional circular projection will be cast on the card. This shows that the three dimensional, cylindrical shadow is really made up of an infinite number of circular projections, no one of which has any appreciable thickness.

"But a shadow could hardly be considered as a material object, although Peter Pan was supposed to have lost his shadow. Then there was the other Peter—Peter Schlemiel, of the German story book, who sold his shadow to the Devil. In this charming fable, his satanic majesty is pictured as rolling Peter's shadow up like a blanket and carrying it off under his arm. All this, of course, is pure fantasy.

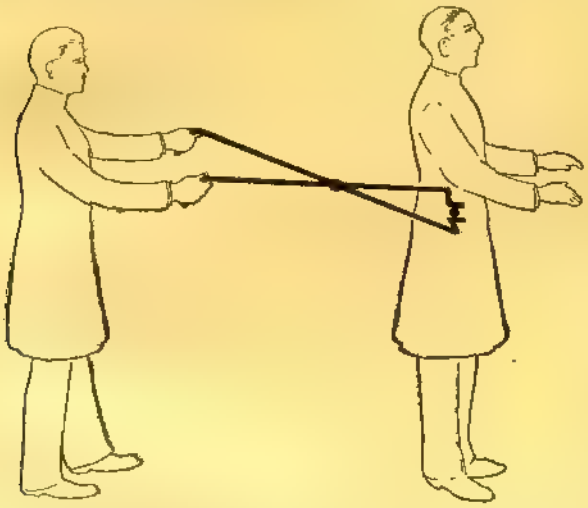
"In order for your Flatlander to have real existence, he must be made up of particles of matter, and that in itself makes *some* thickness necessary, even if he be only one-millionth as thick as the finest gold leaf -which is about the thinnest tangible object we know of Compared to its length and width, this minute thickness would be practically equal to zero.

Yet we can conceive of piling on top of each other a sufficiently large number of such objects to build up a thickness that can be seen and measured just as we can conceive of a three dimensional shadow as being made up of an infinite number of two dimensional projections.

"Now, let us assume that there are three of these Flatlanders who are developed enough mentally so that they can *think* in a third dimension and can imagine the possibility of motion in a third dimension. Duodim number one, a mathematician, draws a picture of a three dimensional object, such as a cylinder, just as any artist can draw on a perfectly flat piece of paper a picture that looks exactly like a solid object.

"Suppose Duodim number two—a mechanical expert, using this picture as a basis, cuts a large number of circles out of some material which of course would have to be very thin—and places these circles one on top of the other until he has actually made a cylinder. It would be but a step farther for him to construct two rods, fasten them together in the form of a pair of tongs and bend them in such a way that Duodim number three—who is skillful in the use of instruments—can pick up something in the same plane a short distance away.

"Perhaps a diagram will make my meaning clearer." He picked up a pencil and a piece of paper from the kitchen table I used as a desk and rapidly drew a sketch like this:



"Pardon me," I interposed, "but I'm afraid there is a serious fallacy in your theory. In order to lift another object with a contrivance like that, your Flatlander would be obliged to move through the third dimension himself, and, according to the original premises, this would be impossible."

"Quite true," the professor concurred. "My sketch was not intended to be a practical working drawing, but merely a means of illustrating an idea. However, it ought to be easy for you, with your knowledge of mechanics, to design an instrument by means of which motion in one plane can be converted into motion at right angles to that plane. Isn't that possible?"

I had to admit that it was.

"Very well. All we need to do is construct such a contrivance having extension in the fourth dimension and Doctor Mayer will be able to remove my gall-stones without the slightest pain or shock to my system."

"But how am I going to know what a four dimensional forceps or tongs looks like?"

"Leave that to me. Just as the Flatland mathematician can draw a picture on a flat surface, showing what a three dimensional object looks like, I, by using three dimensional units, can construct models which will visualize to you the appearance and characteristics of a four dimensional object. This may sound complicated, but it really is quite simple. I can take any child ten years old of ordinary intelligence and, by means of a brief explanation and a few questions, I can get him to work out the attributes of a tesseract or four dimensional cube. Let me illustrate."

He picked up the pencil again and jotted down these headings:

	Number in Initial Cube	*Number Generated by Motion*	*Number in Final Cube*	*Number in Tesseract*
Points (Corners)	.....	.....	.....	.....
Lines (Edges)	..	.. ..	. ... .	.....
Faces (Squares)	.. ..	.. .. .	. .. .	. .. .
Solids (Cubes)	....	. .	. .. ...	....

"Of course you understand how a tesseract is generated. You first move a point, or a corner—if you prefer that nomenclature—a unit distance, say one centimeter. This generates a line or edge one centimeter long. Next, you move the line for a distance of one centimeter at right angles to itself, thus forming a square with an area of one square centimeter. The next step is to move the square one centimeter at right angles to both its width and length, which will form a cube, one centimeter long, one centimeter wide and one centimeter high. Now, it only remains to move the cube for a distance of one centimeter in a direction which is at right angles to its length, width and thickness but is not parallel to either of its three dimensions and we have a unit tesseract.

"Let's see what this hyper-cube will look like. First we know that the cube we start with has how many corners?"

"Eight," I answered after a moment's thought.

He jotted this down in the diagram. "And how many edges?"

"Twelve."

This also he wrote on the slip of paper. "And how many faces?"

"Six."

"And of course there's just one cube.

"Now, when we move a corner, no other corners are generated; but at the end of the operation we have a second cube with eight corners, so the total number of corners in our tesseract will be how many?"

"Sixteen," said I.

"Correct. And each corner as it moves through space will generate what?"

"A line."

"And there are how many corners in the original cube?"

"Eight."

"Therefore, eight lines or edges will be generated by the motion. If we add the twelve edges in the original cube and the twelve more in the cube at the end of the movement, we will have how many?"

"Thirty-two."

"Thirty-two edges," he repeated.

"Now for the faces. We started with six square

faces in the original cube and there would be six more in the final cube. Would there be any more?"

"Certainly. Each edge would generate a square. There are twelve edges in the cube, so there would be twelve new squares generated. Six and six and twelve makes a total of twenty-four faces in the tesseract. Am I right?"

"Very good, indeed. You seem to grasp the idea admirably. Now see if you can tell me how many cubes there will be in the tesseract."

"Let me see. You have one cube to start with and one more at the end of the motion. Each square generates a cube. There are six faces in the cube. Six and two makes eight cubes in the tesseract."

"Correct!" said the mathematician as he jotted down the last figure and handed me the diagram. It read like this:

	Number in Initial Cube	*Number Generated by Motion*	*Number in Final Cube*	*Number in Tesseract*
POINTS (Corners)	8	0	8	16
LINES (Edges)	12	8	12	32
FACES (Squares)	6	12	6	24
SOLIDS (Cubes)	1	6	1	8

"You see how simple it is. All we need to do is construct an object bounded by eight cubes, twenty-four square faces, thirty-two edges and sixteen corners and we have a four dimensional cube or tesseract.

"Since any object can be divided into a number of parts, each of which is a geometric solid of some description, and since I can work out the characteristics of the four dimensional counterpart of any geometrical solid, it ought not to be difficult to construct any kind of object in such a way that it will have extension in four dimensions. Don't you think that's reasonable?"

"It certainly sounds reasonable to me."

"And you will help us carry out these ideas in a practical way?" inquired Doctor Mayer.

I hesitated.

This seemed to surprise them. My enthusiasm had evidently led them to expect my immediate consent. After a moment of deliberation, I said, "I'm sorry to disappoint you, and I can't tell you how much I appreciate the compliment you have paid me; but I'm afraid I shall not be able to help you."

"Is it a question of finance?" Doctor Mayer wanted to know. "If so, you may rest assured that there will be plenty of money, both for whatever you need in the way of equipment and materials and also for your own remuneration."

"I wasn't thinking of money," I hastened to assure him. "There's no one dependent on me and my chief ambition is to serve humanity as well as my meager ability will permit. Otherwise, I am satisfied with a bare living. I happen to be broke and loafing right now; and, to be frank with you, I'm desperately in need of work. But—"

"Then why in the world won't you work for us?" Professor Banning interrupted.

"For the same reason that a man who has narrowly escaped drowning avoids skating on thin ice."

"Surely, you don't think there is anything to be afraid of!" This from the Doctor.

"Well, Sidelburg didn't think there was anything to be afraid of—and look what happened to him. I'm not superstitious exactly, but sometimes I think that Nature resents our efforts to pry into her secrets—and punishes those who are too rash and importunate in wresting knowledge from her."

"Nonsense!" the Professor scoffed. "If that were so, Thomas A. Edison, Orville Wright, Robert Milliken and hundreds of other great men would have been destroyed long ago. Sidelburg was merely the victim of an unforeseen accident. He had just as good a chance of being struck by lightning or swallowed by an earthquake as of being destroyed by the Four Dimensional Roller Press.

"I read in the paper the other day about an elderly lady who was trampled to death by a trained elephant which became frightened while being led through the streets to a theater where it was to perform in a vaudeville act. I suppose that poor old lady has repeatedly worried about getting cancer or tuberculosis or being run over by an automobile, but I don't imagine she ever worried a minute about being trampled by an elephant."

Doctor Mayer took up the argument. "You said a moment ago that your chief ambition is to serve humanity. If you really meant that, here's your opportunity. Just think of the suffering that can be relieved when four dimensional surgery becomes a reality. Think of the lives that will be spared and prolonged—the grief and pain that will be assuaged—the added happiness that will be made possible. Suppose there is some danger. You say there's no one dependent on you. Aren't you man enough to take some risk to accomplish this great humanitarian purpose?"

Of course I gave in and consented to lend my aid to the enterprise. What else could I do? That very day I packed my meager belongings and, accompanied by Doctor Mayer and Professor Banning, boarded the west bound express.

Winchester had been selected as the place to carry on our work—for very logical reasons. To me, one place was as good as another. Professor Banning was equally indifferent to geographical location. I learned that he had just embarked on his sabbatical year and had planned to devote the entire vacation period to the development of four dimensional surgery.

Doctor Mayer, on the other hand, was still carrying a heavy load of responsibility in connection with his clinic. While it was not necessary for him to devote any appreciable amount of time to the work of producing the first four dimensional forceps, it was thought best for us to be near him, in case we wished to consult him on the medical aspects of the undertaking.

A portion of the hospital ground had been set aside for our use and a contractor had been engaged to erect a small building. Professor Banning and I together drew up the plans and supervised the construction work. While the structure was being built I gave most of my attention to ordering materials, machinery and other equipment.

As I look back now to the months I spent working shoulder to shoulder with one of the greatest scholars that ever lived, I begin to realize that the best education a person can get is that acquired from intimate association with people of superior intellect.

Professor Banning was the most charming and interesting of companions. As we worked together at tasks that frequently were purely mechanical in

character, we talked about a variety of subjects as far away from mathematics or mechanics as Tacoma is from Timbuctoo. There was scarcely a topic with which Professor Banning was not thoroughly conversant. His remarks revealed not only a surprising mass of information but an authoritative grasp of fundamentals as well. He was equally at home in discussing literature, architecture, music, philosophy, anthropology, philology, physics, advertising, law and theology. I listened to him with open ears, absorbing wisdom as a sponge sucks up water.

One day I started something by introducing the subject of spiritualism.

"Did you notice the article entitled 'The Denizens of Hyper-Space' in this month's issue of *Science and Psychology?*" I inquired.

"No, I haven't seen that yet. Who wrote it?"

"Doctor Hermann Gesellschaft."

"From Heidelberg, isn't he?"

"I shouldn't wonder."

"Well, what did he have to say?"

"I'm not sure I got it all clearly in my mind; but, so far as I could make out, he tried to explain certain psychic phenomena by the hypothesis that spirits are able to move through the fourth dimension. Among other things, he quoted a Professor Zoellner of Leipzig, who claimed that he had held a rope by both ends and had seen a square knot tie itself in the rope before his very eyes. He accounted for this seeming miracle by attributing it to spirits operating in the fourth dimension."

Professor Banning vociferated: "Zoellner was a fool and a dupe. Like some other pseudo-scientists I could mention, he permitted himself to be hoodwinked by mountebanks who posed as spirit mediums."

It was the first time I had seen the professor forget his usual tranquillity and kindly manner of speech. Perhaps it was his mathematical training that made him so intolerant of the idea that anything could exist outside the world of purely material things.

I made the mistake of persisting too long on the subject. "To me, the explanations of Gesellschaft and Zoellner sounded quite plausible. With so many marvelous discoveries being made every day, how can we say that the existence of spirits—or anything else, for that matter—is impossible? As Polonius said to his son, 'There are more queer things in heaven and hell than were ever dreamed of in your philosophy!'"

This provoked a snort of disgust from the professor. "Young man, your quotation is as addled as your reasoning appears to be. It was not Polonius but Hamlet that spoke those lines, and he said nothing about hell. The correct quotation is: 'There are more things in heaven and earth, Horatio, than are dreamt of in your philosophy.'"

I didn't need to look up this passage to be certain that he was right. He always was right.

The professor stamped out of the workshop, leaving me very much squelched and cogently conscious of how superficial was my own paltry stock of knowledge when compared with that of a real scholar like Banning.

TEN minutes later he was back at my side, as affable and agreeable as if nothing had happened. As a result of our assiduous efforts, the four dimensional forceps was gradually taking shape. If you will bear in mind that—just as a three dimensional solid is bounded by two dimensional surfaces—a four dimensional object must be bounded by solids—you will get an idea of what the Hyper-Forceps looked like. For instance, the parts that would ordinarily be cylindrical in shape were made up of thousands of small spheres grouped together like an elongated bunch of tiny grapes. You must remember, however, that these spheres cannot be placed next to each other, behind each other, or on top of each other. One authority calls the fourth dimension *"Through,"* suggesting that the parts are placed *Through* each other. This relationship in the position of the parts that make up a four dimensional object is one of the hardest things for the human brain to grasp. I must confess that, without the aid of Professor Banning's models and formulas I should never have been able to construct the Hyper-Forceps.

The mention of formulas brings to my mind a somewhat amusing incident which occurred when we were approaching the fulfillment of our task. One morning Professor Banning came into the workshop with a common wooden bucket tilted at a rakish angle on his venerable head. He looked so comical that it was with the greatest difficulty that I suppressed an inclination to giggle. But the high respect which I had always felt toward him forced me to keep my face straight. I fancied I saw him casting surreptitious glances in my direction, as if he were trying to catch me grinning, but not a flicker of a smile did I dare venture.

Finally he spoke. "I suppose you want to know why I'm wearing this bucket. Maybe you think I'm crazy; but 'if this be madness, there's method in't' as our mutual inspiration, the Bard of Avon, puts it.

"The hardest thing I have to encounter in working out the formulas for these hecatonicosiahedragons and other polyhedragons is that I have to carry so many figures and symbols in my head. That, in itself, would be easy enough if it were not for the other figures and symbols which do not belong and which come into my head from *outside*,—thus mixing up my formulas. I recently discovered that these extraneous figures cannot penetrate wood. So all I have to do is keep this bucket over my head and the figures outside cannot get in."

"One of these days I'll have to borrow your bucket," I jested. "Not to keep the outside figures from coming in, however. For, when I finally manage to get one of your formulas *inside* my noodle, I feel as if I need a bucket or something thicker,—to prevent the symbols that are *inside* from getting *out*. But if, as you say, the figures can't get through wood, perhaps I'm already protected."

This seemed to tickle the Professor. He was even constrained to pay me a compliment—something extremely rare for him. He put his hand on my shoulder and said, "My boy, there's nothing radically wrong with your head. At any rate, it isn't swelled, and that's something."

"I don't see how anyone could get swell-headed over his thinking capacity when he's working with a real thinker like you," I came back at him.

"Thanks, my boy; but I'm afraid my mind isn't working so well today. This old carcass is pretty well worn out. Those pains have been bothering me again. I think I'll knock off for today. Can you get along without me?"

I told him that, so far as his part was concerned, the Hyper-Forceps was practically finished. It only lacked certain finishing touches which were purely mechanical in character and which I felt certain I could work out alone.

From that day, Professor Banning failed rapidly in health. It was as if the excitement of striving for achievement, which, like a powerful electric current had kept him going through months of gruelling strain, was suddenly snapped off leaving only his feeble old body to fight the ravages of age and disease.

Realizing the necessity for speed, I worked with merciless haste, carrying my labors far into the morning hours and grudgingly taking but an hour or two each day for sleep and a bite of food.

At last the Hyper-Forceps was finished. In general outlines it was not unlike an ordinary medical forceps, except that it had a rough appearance, due to the thousands of small solids with which it was bounded. For instance, the portions that one would expect to be cylindrical in shape were made up of the small spheres which I have previously described, and their surfaces resembled those of a raspberry.

The really distinctive feature of the Hyper-Forceps was that it had four finger-holes or handles like those of a pair of scissors. There was only one pair of jaws, however, and they could be operated by either set of handles, working independently or in unison. When the two sets of handles were kept together, the device worked exactly like an ordinary three dimensional forceps. But when the right hand pair of handles was separated from the left hand pair, it operated a unique mechanism by means of which the jaws were made to move at right angles to each of the three dimensions of ordinary space—in other words, through the fourth dimension. This had been all figured out theoretically with such painstaking care that I felt absolutely certain it would work—though I, myself, during all my work and experimentation, had never attempted the crucial test.

It had been agreed between us that Doctor Mayer was to be the first one to operate the Hyper-Forceps through the fourth dimension, and I was perfectly content to concede that honor to him. Though it was as strong and rigid as a similar article occupying only three dimensions, I handled the Hyper-Forceps as carefully as if it were a beaker of thin glass filled to the brim with nitro-glycerine.

I took it immediately to Professor Banning's room and told the nurse to notify Doctor Mayer that the four dimensional forceps was finished. He had just completed an important operation and he still wore his surgeon's cap and frock when he entered the professor's room.

It was decided to put the Hyper-Forceps to the test right then and there. An inanimate object was selected for the first trial. Doctor Mayer picked up a medicine bottle from the table by the bed, drew out the cork and poured the contents into the wash basin. He then took from his pocket a lead pencil, jerked off the small rubber eraser, dropped it into the bottle and replaced the stopper.

"I shall attempt to take that rubber from inside the bottle without removing the cork," he explained. He placed the bottle on the table and reached for the Hyper-Forceps, which I handed him. Inserting the tips of his right thumb and forefinger in one pair of handles, and those of his left hand in the other pair, he slowly manipulated the unique mechanism which we had devised for converting motion in three dimensional space into a corresponding movement at right angles to each of the three dimensions.

PREPARED as I was for something preposterous to happen, I was dumfounded to see the Hyper-Forceps, part by part, melt into nothingness and disappear from sight until only the handles were visible.

Guiding the instrument entirely by guess work, the Doctor moved it until he estimated that the invisible jaws ought to be somewhere inside the bottle. Then he brought the two sets of handles together. As if by some weird magic the jaws of the forceps became visible within the bottle, but they seemed to be suspended in space, with no apparent connection between them and the handles. It was a simple matter to work the handles until the jaws grasped the eraser. By separating the two sets of handles again, the Doctor caused the rubber to disappear completely, after which he pulled the handles away from the bottle and once more brought the handles together. Within a few seconds, the eraser had been lifted right through the solid walls of the bottle and had been dropped on the table!

"It works! It works! It works!" the Professor kept repeating in a shrill tone of voice. He arose and started jumping up and down on the bed, cutting a very grotesque figure in his outing flannel night shirt.

Doctor Mayer, too, was abnormally excited. He clapped his hands together and cried, "Oh boy!" like a kid who has just received his first air rifle.

It was not until afterward that I gave any thought to the incongruity of their behavior in comparison with my own. I, a callow youth, forty years younger than the Professor and fully twenty-five years younger than the Doctor was as cool and calm as an Eskimo, while these two dignified and mature men were cavorting around like a couple of first-graders.

"Can't you operate on me right away?" was the Professor's first thought.

"Why? Are you in very great pain?"

"No. In fact, the pain seems to have left me. But I just can't wait for you to try out the Hyper-Forceps on me."

"Unless it's a matter of life and death, I'd rather put it through some more tests, and incidentally get more practice in using it before I attempt to operate on you," was the Doctor's sensible suggestion. "The next thing I'd like to try is removing some object I can't see, like the inside of a nut."

"Would a peanut do?" I asked. Perhaps I ought to explain that I have a weakness for "goobers" and I had a few in my pocket, left over from a bag I had purchased that noon.

"Just the thing!" exclaimed the Doctor, as I handed one of the nuts to him.

Again the Hyper-Forceps was brought into play. It took a little longer to accomplish the purpose this time, as it was necessary for Doctor Mayer to grope around until he felt the kernel within the grip of the jaws. But he finally got hold of each of the two kernels in turn and dropped them on the table.

Like "doubting Thomas" of the Scriptures, I wasn't quite satisfied until I had made a personal investigation, lifted the shell, still perfectly intact, and shook it near my ear. Not a ghost of a rattle could I hear,

and the lightness of the nut was further proof that the amazing feat of removing the kernels without breaking the shell had been accomplished.

"Now for a trial on a living creature," cried the Doctor. "Let's go to my private laboratory. I think I have a good subject to experiment on."

Professor Banning donned his bathrobe and slippers, and the three of us went to the laboratory. Doctor Mayer's "subject" turned out to be "Wilhelm," a Toggenberg goat, which he had procured as a subject for some medical experiments.

"Here's an opportunity to see whether the popular jokes about the alleged cosmopolitan character of a goat's diet are founded on fact," he jested. "This time, I think I'll use my X-ray goggles. You know about them, of course?"

We both shook our heads.

"There's not much to them. Same principle as fluorescent screens, but made in the form of goggles for convenience. I use them in connection with this specially designed operating table. You see, it has a Roentgen tube arranged in such a way that it throws the X-rays right through the body of anyone lying on the table."

He lifted Wilhelm to the table and strapped him fast. Then he threw the switch that operated the X-ray apparatus and adjusted the goggles to his eyes. In order that we might get the full benefit of the experiment, he provided each of us with fluorescent goggles.

That the goat had some foreign substances in its stomach was instantly apparent. Doctor Mayer picked up the Hyper-Forceps and worked the handles. Again the instrument, except for the handles, faded from sight. This time, Doctor Mayer seemed to have considerable difficulty in placing the jaws where he wanted them.

"Odd!" he exclaimed. "Most peculiar feeling. Like pushing something against some yielding substance or against a strong current of air or water. See, in this direction it moves easily; but I have to use all my strength to make it move in the opposite direction." So absorbed were we in the experiment itself that we made no attempt to explain this remarkable phenomenon just at that time.

By exercising the utmost care, accompanied by the expenditure of considerable elbow grease, the Doctor finally succeeded in forcing the Hyper-Forceps into the position he desired. Then he brought the two sets of handles together, making the jaws of the forceps appear inside the goat's stomach. Then, one by one, he removed the following objects: An iron bolt, three shingle nails, a tire valve cap, a boy's marble and two safety pins. Through it all, Wilhelm kept up an incessant, "Ma-a-ah! Ma-a-ah! Ma-a-ah!" but did not seem in the least bit distressed during the moments when the four dimensional forceps was exploring his internal workings.

"Well, that ought to be proof enough that it works," Professor Banning remarked. "The only thing that remains now is to try it on my gall-stones. I move that we do it *right now!*"

Doctor Mayer seemed equally anxious to make the final test. "All right," he assented, "but first let me send for my brother. Though I don't expect any complications it may be best to have another surgeon present."

Doctor Julius Mayer responded promptly. He had, of course, heard all about the four dimensional forceps from his brother, and it took but a few moments to explain the device to him.

"It won't be necessary to make any special preparations, will it?" asked the patient.

"I don't see the need of it, except that I shall of course sterilize the Hyper-Forceps. You might get a can of ether handy, Julius, to use in case something unforeseen happens. But, judging from the way that goat behaved, I'm sure we won't have to use it."

CLAD just as he was, in nightgown and bathrobe, Professor Banning stretched himself out on the operating table. Doctor Paul Mayer turned on the X ray and adjusted the fluorescent goggles.

As he started to manipulate the Hyper-Forceps, he again remarked about the difficulty he experienced in forcing it to move in certain directions and the ease with which it moved in other directions. However, he finally succeeded in introducing the jaws of the forceps into the patient's body, where we could plainly see them with the aid of our X-ray goggles. After several trials, he placed the jaws of the instrument inside the gall bladder, where the offending gall stones could be dimly discerned. All this time, the Professor was fully conscious of what was going on.

"Feel any pain?" the surgeon asked.

"Not a bit."

"Any unusual or peculiar sensation?"

"Not yet. Ouch! I did that time! It didn't hurt very much, though."

"I just pinched your liver a trifle," the Doctor explained.

Just then, a horrifying thing happened. The inside of Professor Banning's body, made faintly visible by means of the X-ray, seemed suddenly to melt away. A few seconds later his ribs faded from view. At the same instant, Doctor Paul Mayer gave utterance to an agonizing cry, "My God! There's something pulling against me!"

I jerked off the goggles and dashed to his side, exclaiming, "Can't I help you?"

"No. Better keep away! Good heavens! Look at my arms!"

My blood almost congealed at the unspeakable sight! His arms seemed cut off at the elbows! His forearms and hands had disappeared completely, and so had the handles of the Hyper-Forceps!

I took another horrified glance at Professor Banning's body just in time to see it fade completely from view!

By this time, all of Doctor Mayer's arms and part of his chest had "melted" from sight. His brother rushed to him and grasped him around the waist as if to draw him back to safety. He might as well have tried to hold a wisp of smoke. The last words we heard from Paul Mayer were, "For God's sake, let me go!" With a moan of despair, his brother released his hold. A moment later, not a vestige of either Doctor Paul Mayer, Professor Banning or the Hyper-Forceps remained.

Julius Mayer and I stood looking at each other, both of us transfixed with horror. In his face, I saw reflected all those emotions and sensations which were racking my own body and brain:—grief, perplexity, awe, and—overshadowing all else—a ghastly consciousness of stark fear.

He was the first to speak: "My God, what shall we do now!"

"Perhaps we'd better notify the police," I stammered.

"Good Heavens! Don't do that! Not yet, at least. Let us first be sure we've done all we can ourselves. You know more about this wretched four dimensional business than I do. Can't you suggest something?"

"Possibly they are still in this room, but have merely been made invisible," was the only suggestion I could think of.

Acting on this hypothesis, we groped about the room, exploring every portion of it with our hands and arms. We even placed a stool on top of a wheeled stretcher, such as are used for carrying patients to and from the operating room, and I stood on it and thoroughly probed the space for several feet below the ceiling, while Mayer wheeled me about the room.

I might have known how useless this procedure was, since a person who has moved far enough into the fourth dimension to be out of sight would of course be out of reach as well. However, anything was better than doing nothing in the face of such a dreadful and critical situation. At the end of an hour, we had to admit our helplessness. We could understand the feelings of a naval officer who knows that many fathoms beneath the keel of his ship there are thirty gallant men slowly dying horrible deaths in the belly of a disabled submarine and yet is utterly powerless to do anything to help them.

Hopeless in his despair, Julius Mayer finally said, "I suppose there is nothing to do now but notify the police. I'm afraid that we are going to have a hard time explaining how my brother and Professor Banning disappeared."

"Well, if I'm to be put through the third degree, I suppose I may as well change my clothes." I was still wearing the overalls and work shirt which was my customary apparel while laboring at my mechanical tasks.

Leaving Julius Mayer to take care of the formality of notifying the authorities, I went to the work shop, where my street clothes were hanging.

As I entered the room where Professor Banning and I had worked together for so many eventful weeks, I had a strangely weird feeling of dread—such as a superstitious person might experience on coming unexpectedly into a graveyard. I experienced a mysterous consciousness that there was somebody present who could not be seen or heard.

Then my attention was arrested by a most astounding phenomenon. A drop light, which had been installed to enable us to work at night, was behaving in an amazing manner. The cord was drawn to one side until it was almost horizontal, with the globe and shade apparently supported in space in utter defiance of the law of gravitation. My eye, searching for an explanation of this miracle, suddenly encountered something which I recognized instantly as the jaws of the Hyper-Forceps!

If I was scared before, I was thoroughly terror-stricken now. I could feel the goose flesh rising all over my body and my hair began to bristle, "like quills upon the fretful porcupine."

My first impulse was a cowardly one—undoubtedly prompted by the universal but sometimes dastardly instinct of self-preservation. I wanted to run away—to call help—to let someone else take the risk of rescuing those two men whom I now knew to be hanging out there in hyper-space with nothing but two flimsy strands of electric wire holding them to earth

Just what made me stay, I am not sure, but I think it must have been the genuine love with which I had learned to regard Professor Banning. In many ways he had treated me as a father would treat his son, and to me, who had never enjoyed the benefits of a parent's care, this had meant a great deal.

That quick action was imperative, and that there was no time to go for help, was immediately apparent. The cord was manifestly under a greater strain than it could be expected to bear very long, and I heard an ominous crack which told me that one of the screws holding the fixture to the ceiling had become loosened.

For one who never made any claims to strength or courage, it took a heap of nerve to do what I did. I could easily imagine just how Lindbergh felt when he stepped into the cockpit of the "Spirit of Saint Louis" and hopped off across the storm-tossed sea, not knowing whether he would ever come out alive. How was I to know what frightful fate might take possession of me the moment I grasped the jaws of the Hyper-Forceps? Would it be possible for me to draw these two men back to earth, or would my own body be sucked into eternity, just as the body of Doctor Mayer had been pulled away before my very eyes?

Whatever was to be the outcome, there seemed to be nothing else to do, so I leaped on the work bench, which was just high enough to enable me to reach the jaws of the Hyper-Forceps. I had presence of mind enough to brace myself by a tight grip with my left hand on the framework of a large machine drill before I reached with my other hand for the Hyper-Forceps.

Just as I grasped it, the last of the screws holding the light fixture gave way, and with a jerk that almost pulled my arm out of its socket, the entire strain was shifted to my body. I managed to hang on, however, and in a little while the stress was somewhat relieved. It felt like holding the string of a big kite in a strong wind—just a steady, powerful but yielding tug. I found that by exerting myself, I was able to pull against the force that was resisting me. Gradually, more and more of the Hyper Forceps came into view until it was entirely visible. Though I had fully anticipated what was to happen next, it seemed almost too preposterous to believe when I perceived a detached human hand clinging to the handle of the Hyper-Forceps and apparently suspended in midair. As I slowly drew it toward me, first the right arm, then the torso and legs and finally the head of Doctor Mayer loomed into view. His left arm, except for a small part close to his shoulder, was still invisible, however.

By this time, Doctor Mayer was able to help himself by hooking one foot in a vise which was fastened to the bench, and with this extra bracing added to my tugging on the Hyper-Forceps, we quickly succeeded in drawing into the room the body of Professor Banning whom the doctor had been holding by the hand.

You can easily imagine the relief which they felt at being snatched from a horrible fate, and you can

also picture the joy with which I welcomed back these two travelers into the mystic realms of hyper-space.

Like a typical youngster, I plied Professor Banning with questions, which he undertook to answer somewhat as follows: "As nearly as I can figure out, the part of the Hyper-Forceps which extended into the fourth dimension must have been caught in some current of cosmic force which was strong enough to draw the entire instrument out of three dimensional space, pulling Doctor Mayer and myself with it.

"Naturally, it will take me some time to work out a truly scientific explanation, but there were certain indications which led me to believe that as soon as we disappeared from your sight we began to lose our gravitational attraction for the earth. I put it that way because, as you doubtless know, every object on the globe attracts the earth itself just as truly as the earth attracts it.

"Being projected into the fourth dimension had the effect of relieving us from some of the gravitational attraction of the earth, but our bodies still had momentum enough to carry us along with the earth. Of course we did not lose all our gravitational attraction for the earth, but only a portion of it. Had we lost all, we would have been shot out into space by centrifugal force, like rocks shot from a sling. Perhaps our position might be likened to that of a piece of iron which is moved from in front of a magnet to one side of it, so that the lines of force extended at a changed angle and with a diminished force.

"After a few moments we noticed that we seemed to be slowly drifting away from the place where we originally left three dimensional space. I account for this by the assumption that our momentum was being slightly decreased while the motion of the earth was continuing at the same rate of speed. Our bodies passed easily right through the walls of the hospital building. Though everything was plainly visible to us as we floated along, we found that all efforts to grasp or hold any three dimensional objects were fruitless. They melted in our fingers like so much vapor. Our bodies also seemed almost transparent and I found that I could easily stick my hand right through my own chest without any discomfort. At the same time, I found that when I grasped Doctor Mayer's hand, in order to prevent us from being separated, I was able to hold it and to stay close to him without being able to feel any sensation of contact. With his other hand, Doctor Mayer still clung to the Hyper-Forceps. It was a good thing he did hang to it, because without its help we should never have been able to get back.

"In a little while we found ourselves floating through the workshop. I quickly realized that if we continued to drift in this manner we would soon be left hanging in space with the earth hurtling away from us at a terrific speed. It was then that I thought of using the Hyper-Forceps as a means of getting back. Acting on my instructions, Doctor Mayer grasped with the Hyper-Forceps the first object he could reach. It happened to be that light-cord. It was lucky you came in when you did, because it seemed impossible for us to pull ourselves back without help. Please bear in mind that this explanation is purely superficial and there may be some flaws in it which I shall have to correct later when I have had an opportunity to go more deeply into the scientific aspects of the subject. In general, however, I believe that the solution of the mystery is about as I have given it. Does that make everything clear, or would you care to ask any more questions?" This last sentence was a favorite of his which he invariably used in the class-room at the end of each lecture.

"There's just one more thing I'd like to know," I ventured. "What about your gall stones?"

"Oh, they are all gone, thank Heaven. While we were drifting around in hyper-space I could look right inside myself and I could see those pesky gall stones quite clearly. So I just reached inside myself and plucked them out with my fingers!"

THE END.

What Do You Know?

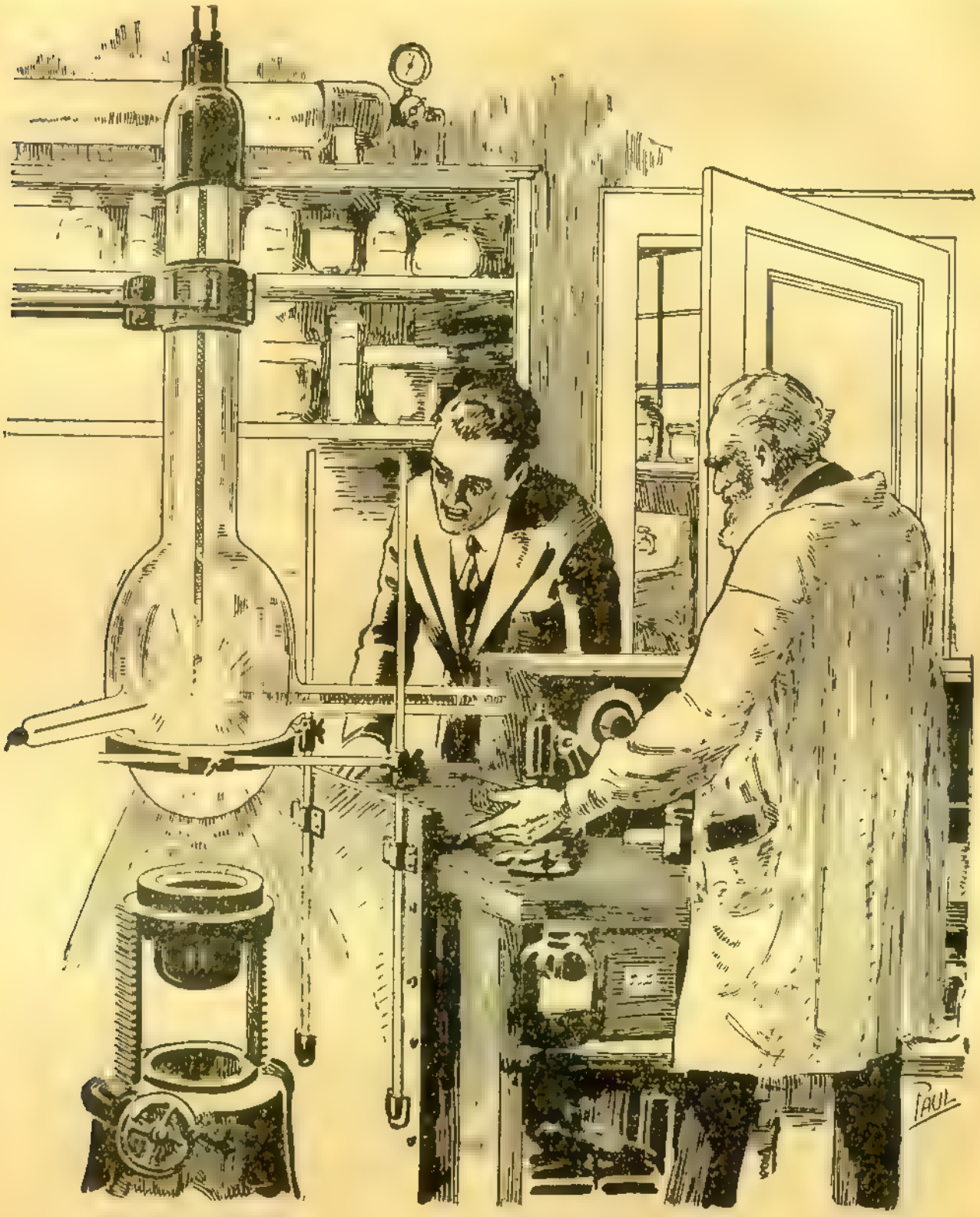
READERS of AMAZING STORIES have frequently commented upon the fact that there is more actual knowledge to be gained through reading its pages than from many a textbook. Moreover, most of the stories are written in a popular vein, making it possible for any one to grasp important facts.

The questions which we give below are all answered on the pages as listed at the end of the questions. Please see if you can answer the questions without looking for the answer, and see how well you check up on your general knowledge.

1. What two savage animals are to be found in the Allegheny Mountains? (See page 1030.)
2. What famous road is there in Japan which is said to be ideal for a motor vehicle race? (See page 1035.)
3. Where was the historic lake submarine built and what were its characteristic features? (See page 1042.)
4. Baron Münchhausen was a real person, whose name has been borrowed for special use in literature. What was his full name and title? When was he born and when did he die? (See page 1062.)
5. How could two grains of sand affect a one-dimensional being? (See page 1080.)
6. What is a Tesseract? Can you start from the conception of a point and develop a tesseract? (See page 1081.)
7. What is the general term for four-dimensional solids? (See page 1083.)
8. What constitutes the difference between atoms of different substances? (See page 1089.)
9. What is the relation between atomic weight and atomic number? (See page 1089.)
10. What are the three principle rays evolved by electrical excitation? (See page 1089)
11. What are these rays? (See page 1089.)
12. Suppose one were able to remove electrons one by one from the atom of any particular element, how would it be affected? (See page 1090.)
13. What is an endothermic reaction? What is an exothermic reaction? (See page 1090.)
14. What is the analogy with the solor system in the arrangement of the constituents of an atom? (See page 1093)
15. In the atom, what part suggests the sun and what part suggests planets revolving around the sun? (See page 1093)

The DISINTEGRATING RAY

by David M. Speaker



"The atomic number of gold is seventy-nine and that of mercury is eighty, so they are only separated by the difference of one electron; consequently, I turn the dial to the number 'one'." The professor's hand went over to the switch, and with a loudly beating heart, I watched him close the circuit

IN the late spring of the year 1926, there was a great deal of excitement in the science division of the State College. It was based on the widespread rumor that Professor Clinton Wild, head of the physics department, had recently made an invention calculated to revolutionize the world. The exact nature of this invention was as yet in doubt, but it was much discussed, and everyone had his own ideas on the matter. It may seem strange to the reader that the professor himself was not asked about his invention, but he was a very grouchy individual who was hated by the students, whom in turn he cordially disliked. At this time I was taking a course in physics which was required for the completion of my course. It was a subject that had always interested me, and as I showed a certain aptitude for this branch of science, the professor gave me the benefit of his special attention. I do not mean to imply by this that he was fond of me; he simply seemed to like me more than he did the others.

In spite of the fact that I was his favorite, it was a great surprise when Professor Wild called me up at my home during the following vacation, and asked me to come over to his house immediately, as he had a matter of great importance to communicate. Instantly, I scrambled into my coat and made a rush for his residence, which was only a short distance away. I arrived in a few minutes, out of breath and keyed up to the highest pitch of excitement. I rang the bell and the professor opened the door. I was surprised to see that his countenance, which habitually wore a sullen expression, fairly beamed with triumphant smiles. However, I was left little time for contemplation, for he led me upstairs to his laboratory at once and showed me the great secret which he had hitherto so jealously guarded.

What I saw was a very large and elongated X-ray tube attached to a mercury exhaust pump. It stood upright and at the bottom was a small iron crucible containing a silvery liquid which I supposed was mercury. Connected with the apparatus was a cable which led to a box at an end of the table on which the tube rested. On one side of the box was a dial which gave it the general appearance of a radio set. Having seen this much, I turned to the professor for an explanation.

"You are probably aware," he began, "that all of my recent work at the college has had to do with the structure of the atom. All my labors tended toward a goal. This goal was the disintegration of the atom. My ambition is realized in the machine that you see here. The disintegration is accomplished by the action of a stream of electrons vibrating at an exceedingly high frequency. Before I go any further, it might be just as well to review your knowledge of the structure of the atom so that you may better understand my invention.

"An atom, as you should know, is composed of two essential parts. First, a nucleus which is principally a positive charge of electricity, called a proton. Second, a certain number of negative charges, or electrons, most of which revolve around the proton at a high rate of speed. Now the important fact for you to bear in mind is that one atom differs from another only in the number of electrons it contains. When an atom has many electrons, it has a high atomic weight; when there are few electrons, the atomic weight is low. Now the interesting thing about it is, that when all of the elements are arranged in the order of their increasing atomic weights, each element has one more electron in one of its atoms than the one before it. This number of electrons is called the atomic number. For instance, silver has an atom of forty-seven electrons, so it has an atomic number of forty-seven. From all this we see that the nature of an element rests solely on the number of electrons in any of its atoms, so that if in any way we can alter this number, we can change its identity. After a great deal of experimenting, I found that this could be accomplished by subjecting the substance in question to the action of my high frequency ray."

I thought by this time that the lecture must be over, but it was nothing to that which followed.

"Having taken a course in physics," he continued, "you should be familiar with radioactivity and alpha, delta, and gamma rays. Of these the alpha ray is the weakest and least penetrating, while the gamma ray is strongest and will penetrate one foot of iron. Also, these rays differ from each other in their compositions. The alpha ray is a stream of positively charged helium ions, the beta rays are simply a flow of electrons moving at a high velocity, and the gamma rays are waves in ether. The X-ray is similar to the gamma ray, but is not nearly so penetrating. Now to explain my machine: First of all, I had an X-ray tube of special construction made for this experiment. In this tube I produce an X-ray of an infinitely greater frequency than the ordinary one. If you look carefully, you will see two extra electrodes sealed into the glass. A current with high voltage is made to go across the gap between them. This results in an electrical discharge like the one in a Geissler tube, as they both consist of a high frequency discharge in a vacuum. This discharge, or stream of electrons, goes before the X-ray. The electrons are swept from their path by the ray and move along with it, and at the same time a high vibratory rate is imparted to them, so what we have now is a sort of super beta ray."

"But," I asked, "I was under the impression that an X-ray tube did have two electrodes across which passed a high tension current under high potential."

"Well," he answered, "it has but this ray is known as the cathode ray. The X-ray is caused by the impact of this cathode ray on some substance in its path called an anticathode. The X-ray is famous for its ability to penetrate some organic substances, but my ray will penetrate any substance, organic or inorganic, and more than that, it is of so high a frequency that it will penetrate an atom!"

The professor having made this amazing declaration, drew himself up to his full height and regarded me triumphantly.

"What do you think of it?"

"It's great! But I fail to see what relation it bears to the structure of the atom."

HERE is a short story of the atom, which will be of more than passing interest to you. Science teaches us that all materials, no matter what they are, are essentially of the same substances, with the exception, that a piece of metal, for instance, has more electrons than the gas hydrogen; otherwise, the two substances are the same. This fact has inspired The Disintegrating Ray, *which gives you a good deal of instruction in a palatable manner.*

"You see," said the professor, "that my ray, which from now on I will refer to as the epsilon ray, is composed of a stream of electrons vibrating at a high frequency. When this ray is directed toward a substance, it penetrates each atom. The electrons of the ray meet the electrons in the atom and there is a collision, which results in the atom losing some of its electrons. This loss changes the identity of the substance. After several months of experimenting, I found that the strength of the epsilon ray depends entirely on the voltage of the secondary discharge. Now I have it regulated so that the ray will remove just one electron per second. I have also discovered another interesting fact, namely, that iron is not affected by my ray. I am not sure just why this is so, but I think it is due to the fact that the magnetic flux set up within the metal counteracts the action of the epsilon ray. Consequently, I can take the heaviest element known to exist on the earth, uranium, and reduce it to iron. Then I can take the element with an atomic number just below that of iron, the metal manganese, and reduce it to hydrogen, but I cannot reduce uranium directly to hydrogen. In a way, this is an advantage, for I can make the apparatus that will be exposed to the ray out of iron; almost any other substance would be disintegrated."

"What," I asked, "is the purpose of the pump?"

"That," he explained, "is to extract the air, otherwise it would disintegrate when I turned on the ray."

"You said that the epsilon ray was of an exceptionally high frequency?"

"Oh, yes! Extremely so."

"How is this accomplished?"

"Well, that is a little invention of my own. I use a radio tube specially connected with a coil system in which there is a set of coils, each of a higher inductance than the one before it. I cannot give you the details now, as it is not yet perfected. The whole is kept in that box with the dial. That dial, or rather the switch that it controls, is another invention of mine made for the machine. It is really a sort of time switch which controls the length of time that the machine is in action. As I said before, the ray will take off one electron per second. If you will notice, the dial is numbered. The numbers refer to seconds and when I wish to reduce a substance to another element of a lower atomic weight, I calculate the atomic numbers between them and turn the dial to that number. At the center of the dial is a small button which starts the machine. When the dial has been turned to the correct number, I press the button and the ray acts for the required time. As soon as it is over and the transmutation has proceeded sufficiently, the instrument automatically stops the ray and the action ceases. Now perhaps you would like to see my machine in action?"

I replied in the affirmative.

Professor Wild walked over to the tube and made some preliminary adjustments.

"Now what shall I turn the mercury into?" he asked, turning to me

"Try gold," I suggested.

"All right," agreed the professor, "the atomic number of gold is seventy-nine and that of mercury is eighty, so they are only separated by the difference of one electron; consequently, I turn the dial to the number one." The professor's hand went over to the switch, and with a loudly beating heart, I watched him close the circuit.

Instantly the silvery liquid hardened and turned to gold. Professor Wild disconnected the epsilon ray tube from the pump, took out the gold and handed it to me. As he did so, one of his peculiar smiles overspread his face. I took the gold and examined it. It seemed to be pure, for it was very soft, so soft, in fact, that I could easily scratch with my finger nail. When I took it, I noticed that it was rather warm, so I asked the professor the reason for this.

"When these electrons were put together, it was done at the expense of a great deal of heat and energy. Now that I tear them apart, this heat is liberated and leaves the element so it becomes cold. But the collision between the electrons that results when I turn on the ray causes a vast amount of heat which more than equals the cold. Or, in other words, the endothermic reaction in which heat is taken in or absorbed from the collision, counteracts the exothermic reaction in which heat is given off due to the disintegration." For a few minutes I stood still, lost in the contemplation of the wonderful machine, when suddenly I had an idea.

"Couldn't you prepare the undiscovered elements that way?"

"Yes, but that idea occurred to me before, and I have done so already." He went to a nearby cabinet and returned with a few bottles.

"You see," said the professor, "that they are only some more metals of the rare earths, all of which are very much alike." He submitted the bottles to my inspection and I saw that each contained a piece of whitish metal that resembled aluminum. He again went over to his cabinet and this time brought back a lead casket.

"The contents of this box would have been worth six or seven million dollars. Now it is worth approximately fifty dollars." He must have read my mind, "Yes it is radium which I can now make at will from uranium.

"By the way, professor," I broke in, "is there any practical use to which you can put this machine? I mean could you possibly make it do anything and be subject to your control?"

"Theoretically, it is possible, but the main difficulty lies in the fact that once the sudden disintegration is started, it will spread and the whole world will cease to exist. So that you may better understand, let me liken the case to an immense pile of gunpowder. If you apply a spark to any point, the whole will go off. But if some is separated from the rest and then is lit, it will not affect the rest of the pile. Now, I cannot separate the substance that I use from the rest of the world, but I can insulate it in an iron sphere, which metal, as I have told you, is not affected by the epsilon ray. Of course, there is another puzzle that confronts me. I have no way of knowing how much power I will get from the particular substance I may use to disintegrate, so there is the danger of the whole thing blowing up and wrecking the laboratory."

"I don't see why there should be an explosion," I said.

"To do so, you must first understand the principle of the thing. In the process of releasing atomic energy, the atom is subjected to a powerful discharge, which instead of merely taking off a few electrons, completely blasts the atom to pieces so that all of the electrons are left flying around. This gives rise to great pressure which can be used for

many things. It is this pressure that may cause the explosion. Of course this is not the ideal way of getting atomic energy, for this would cause a great deal of waste. The best thing to do would be to destroy the atom in such a way that *all* of the energy that originally went into its making would be available. However, that is only a dream at the best. The other is the only practical one that I can see just now. I intend to work on the problem tonight."

"That atomic energy is a great idea, but do you think that you can make it into a commercial product?"

"Undoubtedly so. Just for one minute pause to consider the enormous possibilities of atomic energy. Everyone would be able to have his own power plant, which would supply all of the energy needed for the day. Houses would be lit and warmed by atomic energy machines. Automobiles would be run by atomic energy. The probability that our supplies of anthracite coal and oil will only last for about one hundred years and fourteen years respectively, is a matter of grave concern, but with the key to atomic energy discovered, all of these fears will be dispelled. My idea is to make a machine something like my element-disintegrator, only I will greatly increase the power, so that it will be able to blast the atom completely, instead of just removing a few electrons, as I explained before. Then I will have to develop a machine in which to use the atomic energy. Of course the disintegrator will have a device with which to control the strength of the ray so that it will be able to do anything from disintegrating lead to lighting New York for a week. Isn't it stupendous?"

"It is certainly the most wonderful creation of the age, but don't you see that if you put this invention out on a large scale, you will destroy the exchange system of the world?"

"Why no!" he said in a surprised tone. "How?"

"How?" I echoed, amazed at this scientific blindness to practical facts. "How? Don't you understand that if these machines are distributed, gold, silver, and other precious metals will be manufactured galore?" At this, some of his former enthusiasm took to flight, but after a moment's thought he said:

"Oh, well, that is a very small matter, for I can fix the machines so that they will deliver a large quantity of epsilon rays which will be too powerful for partial disintegration. If the machine is turned on at all, it will result in the complete destruction of the atom; but, of course, this quantity will have to be slightly variable to produce different amounts of energy. Now I fear that I have taken too much of your valuable time, so I will say good night. However, do not imagine that I am driving you away, I wish to make some experiments in an effort to produce atomic energy, which may involve some risk and I do not wish to expose you to any danger that might arise."

I took my coat and went, with the professor escorting me to the door. I was not at all hurt or mortified at my sudden dismissal, for abrupt terminations were characteristic of Professor Wild.

That was the last that I ever saw of the professor, and this newspaper clipping will explain his disappearance:

COLLEGE PROFESSOR KILLED IN EXPLOSION AT HIS HOME.

July 21.—Professor Clinton Wild, noted college professor, was killed in a blast that wrecked his home and broke the windows of several nearby houses. Details have not yet been ascertained.

THE END.

Cosmic Ciphers

—*By* **Leland S. Copeland.**

In deep of night when I awoke
  There came a frank and lonely thought
That some day we should die, and all
  We valued should for us be naught.

But can the Universes mourn
  When transient lives like ours are done,
And we no longer walk a mote
  Day-lighted by a tiny sun?

For flies that fall by human stroke
  Are greater loss to Mother Earth
Than dying men to That within
  The Vast where all the stars had birth.

THE FOURTEENTH EARTH

By Walter Kateley

Then, as I pondered over this, the magic stem suddenly blossomed at the top, or rather exploded like a beautiful rocket in a giant pyrotechnical display . . . here were great luminous clouds and vivid scintillations, like many colored stars and streaks of livid incandescence . . . in a general way outlining an upright, very flat cone.

IN relating this experience, which I feel is entirely unique, I am determined to avoid, as far as possible, all technical terms, and to resort to scientific expression only when it seems necessary in order to convey an understanding of the strange and otherwise inexplicable situations in which I found myself.

I hope that this report will constitute an acceptable excuse to my department for long absence from my post of duty in the Patent Office, and at the same time become a document of some appreciable value in the scientific world. At the time when my narrative properly begins, I had been working for some years as an assistant examiner in the Patent Office; and while I had won no promotion, I think I had gained some recognition from the Primary Examiner, because of my proficiency in matters pertaining to chemistry and physics.

But about the matter in hand.

About a year ago, shortly before my annual vacation, my superior, Primary Examiner Jameson, handed me an application for patent, with the remark that Quinn of the mechanical department had called it squirrel food. In any case, if the application was in regular legal form, we would have to prepare a statement of reasons for rejection.

Upon examination, I found the application was in regular form and that it was made through a very reputable firm of patent attorneys, duly admitted to practise before the Patent Office, by the Commissioner of Patents.

The presentation of claims was made in a singularly lucid and convincing style, but the subject matter—well, there is perhaps no place in the world where one comes in contact with so much that is visionary, incongruous, or downright absurd as in the Patent Office I thought I was quite immune to surprise, but this man was laying claim to an achievement positively fascinating in its ridiculousness.

HERE again we have a characteristic story of great originality. Scientists have steadfastly maintained that there must be other inhabited planes beside our own. Where these planes may be located, few have ventured to predict. But in "The Fourteenth Earth" we find some excellent as well as interesting science. A charming tale, well told, that we know you will enjoy.

It seemed entirely impracticable and supernatural, yet the presentation was convincing and gripped the attention. I read it again and again. The conclusions were so real as to be quite disturbing. It was as if one were to dream in the night of visiting some enchanted land and wake in the morning to find the bedroom cluttered up with souvenirs and photographs from the dream country. Feeling undecided how best to proceed with the examination, I laid it aside, to take it up another day. But my mind kept wandering back to it, just as a sore tongue, in spite of all determination to the contrary, will constantly go back to explore a jagged place on a tooth. So I took it up and read again. The preamble was in the usual form, setting forth the name of the applicant, place of residence and the title of the invention:

George Kingston
321 Barnet Drive
Tillmore

TRANSITE.

This was followed by the customary form of description:

"My invention pertains to a substance hereinafter referred to as Transite; this substance is designed to be employed as an active agent in altering the so-called atomic density of any substance.

"The claims herewith presented have been carefully drawn, and seem to be clearly and fairly allowable, to wit:—That this aforesaid substance when applied or brought in contact with any other substance or matter, of whatsoever nature, will immediately alter the structure and density of said substance or matter to any desired degree by redistributing the electrons revolving around each group of protons, constituting an atom or primary unit of the matter treated."

Then followed a careful description of involved processes in language which was a curious mixture of legal and scientific phraseology, but extremely convincing withal. I was bewildered. Was this necromancy? Was it transmutation, or was it feasible invention?

I searched my mind for knowledge of the physical structure of matter, and to aid my own judgment, I repaired to the scientific library and research room.

In *Scientific American*, November, 1923, I found an article by Sir Oliver Lodge entitled, "Within the Atom," which was quite illuminating.

As near as I can quote from memory, he said in part: "We have gradually learned that electricity exists in two forms, negative, which is called an electron, and positive, which we are now beginning to call a proton.

"The material universe seems to be built up of these two elements; the atom is built on the general pattern of a solar system. That is to say, it consists of bodies arranged like the sun and the planets, on a very minute scale. First of all we find a group of protons, welded together by a compact assemblage of electrons. This central group represents the sun, and otuside it and at a considerable distance from it, we find a regular series of electrons revolving round it, like the planets."

He speaks of the possibility of dividing up these little suns into smaller units, and distributing the planets among them, with this conclusion: "Suffice it to say that an atom of nitrogen can demonstrably be broken up into helium and hydrogen."

So it appeared that the only difference between the gases, liquids and solids, which after all are only relative terms, lies in the number of positive electric particles forming the nucleus of their respective atoms; and these may be changed by artificial means. Therefore in the case in hand, nothing new is involved, only a practical apparatus for accomplishing a transformation already known to science.

BEING somewhat jaded by my past year's work, and somewhat beset by that well known beforehand vacation feeling, I decided to lay the application aside for two weeks, and attack it with refreshed faculties on my return. But even at the old homestead, a thousand miles from my work, I could not forget Mr. Kingston's application.

One day it dawned on me that his address was in my own state, only a few hours ride from me. So I decided to call on him, hoping in that way, to learn something of his methods. I expected to come in contact with a well trained mind. I was disappointed, the next morning, when I found him out.

Without asking me my errand, or even ascertaining my identity, Mrs. Kingston, a florid, pleasant-faced woman of middle age, in a state of acute anxiety, proceeded to tell me that her husband had failed to come in from his laboratory at the usual hour the previous evening, and that she thought he had probably taken a run down town for some necessary article and had been unavoidably delayed. "He seldom goes out without me, but you know when he gets submerged in one of his old inventions he sometimes seems to forget he has me," she said with a half whimsical smile. She had passed a sleepless night, after several trips to the laboratory in the vain hope that he had left some note or clue as to his whereabouts. During the night she had telephoned the police in the city of which this was a suburb, and had called up all the emergency hospitals, but to no purpose. Mr. Kingston's only brother was already on his way by motor from a neighboring town, and she was momentarily expecting the arrival of her mother, who was bringing a police investigator from town.

Of course I offered my services, and asked where the laboratory was located. She led me to the rear of the house past a group of outbuildings to the brow of a very steep hill, overlooking a wide boulevard, and beyond, a recently staked allotment. "He has it here to get the sun," she remarked, as we descended the steep declivity by a few primitive field-stone steps and entered the laboratory. This was very roughly built, the roof being partly of glass, and no floor. As we entered, we stepped into quite yielding sand. I remember that it struck me as rather singular that such a very steep hill could be composed of such unresisting sand. But immediately other things claimed my attention, and I perceived that the place was fitted up very much like the research department in a modern factory.

In the foreground was an upright piece of apparatus about the size of the usual dentist's X-ray machine, but apparently containing quite a number of hoppers, mixers and agitators. As I stopped a moment to regard this, my hostess turned about saying, "I am just going to take another look at the sidehill. It is so slippery this wet weather, it is just possible that he——" I was left to finish the sentence for myself.

I was alone, before this strange device. I had a momentary feeling that I was standing in a presence. On a rack before the machine stood a small alumi num vat, full of a translucent shimmering fluid, on the surface of which floated some dozen or more small discs, about the size of a lady's watch. These were prevented from coming in contact with the sides of the vat by slender spines of chalk-like substance, projecting from all the walls. I noticed that each of the discs had a large number printed on its broad side. And with my mind more than half engaged with the speculation as to the whereabouts of Mr. Kingston, I took up one of the discs. It was rather spongy, and surprisingly heavy; in color it resembled a very green apple.

HARDLY had I lifted it from its insulating bath, than I realized the danger and impropriety of such a rash act, and essayed to lay it down again. But even as I did so, I felt a spasmodic contraction of the muscles of my fingers, and involuntarily I gripped the disc in a crushing grasp. I looked wildly around for help. Whether I cried out or not, I do not know. Then the objects in the room appeared to be rising up and growing taller, till with an indescribable sense of horror I perceived that I was shrinking in height and size. Then my sight commenced to blur, and I had a sensation as of descending in an express elevator. I remember thinking, "This must be the sinking sensation which precedes death." Or did this sensation prevail only under an anesthetic? And I thought "How could it be known what one experiences in dying, since none come back to tell?"

Gradually my mind ceased to function, and I was only conscious of a rapid falling motion, at times somewhat retarded and at other times greatly accelerated. This continued for what seemed a very long time.

Then I brought up with a mild jerk, and as my perceptions reasserted themselves, found myself suspended in the crotch of a low tree, with my feet just clearing the ground. As I was struggling to free myself, I saw a little man about twenty inches tall, coming hurriedly toward me. I decided to wait for his help, which he gingerly offered by supporting my feet, and I had no difficulty in climbing to the ground. It was then that I noticed that I was no larger than my rescuer. I thought, "This is only a temporary hallucination, and I shall come out of it directly."

For a long moment we stood regarding each other, with surprise and wonder. Then the human aspect of the situation asserted itself, and, sensing that certain amenities were required of me, I thanked him in as well-selected words as my muddled brain could muster.

However, the choice of words was of little moment, for he accepted my gratitude with a courteous gesture, and made rejoinder in words that had no meaning for me. Then, as I gazed at my strange surroundings—for they were indeed strange in every detail—he stood, wondering who I was and where I came from. Then for the first time I perceived that I still held the little disc in my hand. Turning it over I read the number,—14. As I stood gazing at this very commonplace number, a realization of what had happened flashed upon me, and I said, half aloud, "So this is the Fourteenth Earth!"

About this time my companion became aware that I was out of my element—lost in a strange world, and with no apparent hesitation, assumed the rôle of conductor.

We were, in what seemed to be a park, or the grounds of a large estate, and he led me to a near-by bench and bade me be seated. Then he took from his pocket an instrument resembling a very small desk clock. This he held in his hand, while he made a few rapid adjustments, and to my surprise, began talking to it. He was apparently giving the listener some instructions, which I, of course, was unable to understand. Then he put the instrument back in his pocket, and came and sat beside me in a friendly manner. Almost immediately a small light vehicle came swiftly along the drive in front, and halted directly opposite us.

This was rather a surprising performance, since there was no driver, and apparently no compartment large enough to house the engine. Straightway my companion entered, and motioned me to a seat beside him. Then, by manipulating a small dial, he started the car rolling very gradually along the road. Directly we commenced to gain speed, and I noticed to my surprise, that little flanges were coming out on the spokes of the wheels. (There were no fenders.) These flanges seemed to catch the air and help to propel us along. Then gradually two sheets of metal started to unfurl on each side of the car, providing two wings, each held rigid on top by two rows of X-bracing that resembled a collapsible support for a desk telephone. We now seemed to touch the ground only very lightly.

SOON we came to a dense wood, and while I was wondering where the road could penetrate this, we rose evenly from the ground, and passed over it. Nor did we alight again until shortly before we reached our destination.

We approached a city, and passed many conveyances resembling our own. As we drew near a large building, to some extent like a modern hotel, but much more ornate, we came down and glided along a smooth broad street. Passing along this street were a great many people, who observed me with the keenest interest. All were barefoot, or wore only sandals on their feet, and their other clothing appeared to be but a single garment. It was of quite heavy but soft material, and reminded me of a child's rompers. It fitted only very loosely and left off at the elbows and knees.

My companion conducted me into a spacious hall, and thence into a small but elegant library, where there were perhaps a couple of dozen people, absorbed in what I took to be scientific apparatus. My guide called out in a very cheery voice, and they all gathered around us in great excitement, and fell to discussing me, and especially my clothes, which they examined very minutely. My companion exhibited me in a very proprietary way. I gathered that they called him Akon.

After a rather lengthy discussion, Akon mounted a chair, and made a little speech. He punctuated this oration with gestures, now toward the others and now toward me. I supposed that he was introducing me, and so when he was done I bowed and smiled and tried to appear at ease, which caused them no little amusement; the reason for this I did not discover till some time afterward.

Then Akon and two of the others conducted me to a private apartment and after demonstrating the various household devices for my comfort, they withdrew, only to return in a few moments with an ample and tasty supper, which they placed before me, and took their leave.

I was hungry and tired and so amazed and confused that I was only too glad to be alone. The food proved to be very palatable. There was quite a variety of it, but I was unable to determine of what any of the dishes were composed. There was no meat or vegetables, in natural state. Everything seemed to be cast in molds, like manufactured products.

Soon I noticed that it was growing dark out of doors, and I wondered if I could compose myself sufficiently to go to sleep. I stayed awake till far into the night, trying to piece together my varied experiences, unable to decide what it all meant.

It was apparent that my body had undergone a change of atomic structure, assuming a greater density. This, no doubt, was the reason I had become so much smaller.

It was also clear that I had descended into the earth, to a place where the atomic density of the surface of an inner stratum was sufficient to sustain me in my altered condition. Here all the people were approximately my own size, and no doubt, of about the same density. I decided that the hardness or density of the things of this surface must bear about the same relation to the density of the next stratum above, as our common earthly things do to the stratum that we call air; and it occurred to me that what I was breathing might be a great many times more solid than granite rock. I fell to wondering how it could be that the little disc had power to change the proportion of the electrons to the protons in all the various parts of my body, yes, even to my very clothes and shoes, and still permit me to live to tell the story.

THEN my thoughts wandered back to the disappearance of Mr. Kingston. I had not thought of him since morning. Now I had no doubt of his fate. Like me, he was taking up his residence in a strange land; I wondered what he looked like, and if I should ever see him. I wondered what the number was on the disc that he might accidentally have grasped. What an age it seemed since I left home in the morning!

The next morning, Akon and his two friends came for me and took me before a judge. I waited with no little anxiety, while a lengthy document was read and while the court questioned each of the three in turn. At length he seemed satisfied, and after his seal had been affixed to the document, we were dismissed.

Not for some weeks afterward did I learn what it was all about. It seems that on my arrival, Akon had presented me, as a gift of a scientific nature, to his club, much as a public spirited man might present a rare trophy to a museum. And that they had appeared before the court with a petition, asking that the trustees be made my guardians and custodians, assuming responsibility for my care and support; and further promising the state the benefit of any scientific discovery that might be made through me. Upon returning to headquarters, I was examined very minutely, weighed, measured and photographed. I will here mention only three particulars in which it was found that I differed from them. My toes, although normal, were much longer than theirs. In fact, they had only vestiges of toes, with no nails. Their thumbs were decidedly further over toward the middle of their hands than mine, giving a correspondingly greater dexterity. They took particular notice of my tonsils, and obligingly showed me that they had none.

From these observations I decided that they were a little farther along than we are, a little older in the scheme of existence.

The physical examination over, they set to work to find out what I knew. Some writing was placed before me, to see if I knew anything of a written language, and some balls were slowly counted. I took up a pencil and wrote a few words, which of

course they could not read. Then I took up the balls, and counted them aloud in order to show them I knew something of numbers. At this they all laughed, and apparently called it a day.

After lunch Akon took me for a drive in the country. Although it was midsummer, I was surprised to see no crops growing, and no sign of any domestic animals. There were a great many beautiful trees, and here and there I saw extensive landscape gardening. There were very few signs of industry. There were many detached houses, scattered over the landscape, all built of the finest stone. But everything was strange. The trees were different in shape and in foliage, the grass of a different green—and in fact everything about me was beyond my understanding. I came home at night more bewildered than ever. The following day they set to work to teach me the language, for it was evident that I must learn to talk to them if they were ever to learn much about my history. Akon undertook to teach me himself. He pointed to objects and called them by name. I repeated after him, and tried to remember as many as possible from day to day; for instance, as we call ourselves people, so they called themselves feli.

Directly I had learned a few words he introduced their alphabet, which I found very simple and easy to write. I applied myself diligently to the work, and within a few weeks found that I was making gratifying progress. At the end of three months, I could speak well enough to tell the society something about my world and how I came to the Fourteenth Earth. Accordingly I met with them one day in the assembly room, and told them, very slowly and laboriously (and I have no doubt very awkwardly), a few of the things about our world that I thought might interest them most. I described, as far as possible, my accidental descent to their world within the earth. They heard me very patiently, albeit with some merriment, and asked me a great many questions. Many of these I was unable to understand, and some I could not answer, because my vocabulary was still so limited. However, I gave them my disc, with the magic 14 on its side and asked them to analyze it.

And now I could learn something of this strange and wonderful country. Now I could ask questions, and understand explanations.

I LEARNED, among other things, that all food and almost everything else used by the feli was made directly from primary elements; that they were so familiar with the functions of electrons and protons that they were able to combine them with ease to form any known substance—many substances still unknown to us. Thus they were relieved of the necessity of growing food stuffs, and of raising domestic animals. They were relieved of the necessity of mining as we practise it, and of a great deal of manufacturing. They had reduced all production to its lowest terms—power.

These electrons and protons which we associate with electricity, they associate with light. They are demonstrating that all power and all matter are only different manifestations of light, and they believe that if they can discover what light is, they will have discovered the secret of life. There all transportation is carried on by motive force, generated at a central plant and broadcast to what they call "light motors" on the cars. These motors were so small that at first they escaped my notice.

Of their religion, I was able to learn but little. Their word for the divinity is Thegel. They build no churches and hold no public services; but when any progress is made in science or invention, the tangible evidence of this achievement is placed in a small chapel or shrine, and allowed to remain in state, so to speak, for three days. For instance, if a medicine is discovered to cure a heretofore incurable disease, a jar of the medicine is left in one of these chapels for three days. There is one of these little buildings in each village, and one for every few thousand inhabitants in the cities. I asked Akon about this peculiar custom, but his answers were a little vague. "That is for Thegel," he said. "Is it for him to see?" I asked, and after some hesitation he explained, "We do not know if Thegel sees or hears, or ever has need of any of our earthly senses; but we hope that there is some kind of a realization that we are making earnest effort, in fact some progress, meager though it may be, to avail ourselves of the divine gifts; that we are struggling up to a higher plane of existence."

This was the only manifestation of any religious belief I saw during my stay. At first it seemed very primitive to me; and I wondered since their civilization was manifestly older than ours, that their religion should be so undeveloped. Their written history, with some few lapses, extends back over a period of approximately eleven thousand years, comparing very favorably with our six or seven thousand. The ability to write, or in some way to record events, is usually considered the factor that differentiates the civilized man from the savage.

I WAS led to contemplate the evolution of our religion, and was surprised to find that, instead of growing in complexity, it was gradually becoming simplified. In the old pagan days, there were numerous gods and goddesses, some good, some bad. And many of the natural phenomena, such as floods, volcanoes, etc., were looked upon as activities of the gods. Sacrifices of animals and even human beings were offered with great ceremony. Huge temples were erected. It took the toil of a great nation for generations to build some of them. Now all is changed. No more sacrifices. Only one God. Buildings comparatively modest, and ceremonies more and more simplified. The major portion of the religious beliefs that were in vogue a few centuries ago, were now looked upon as ignorant superstition.

So it may be in the course of a few thousand years, our conception of the Deity may become less personal, and many of our present religious beliefs may be relegated to the realm of superstition, and our quest of the divine Will may take the form of delving into nature's secrets.

As I gradually learned to read the scientific literature of the feli, I found that they had long held the theory that the earth was composed of successive concentric layers of varying degrees of density, and approximately a thousand miles in thickness; that these layers became more dense and solid in inverse ratio to their outer circumference; that these various surfaces were inhabited, was still in the realm of conjecture, even as we speculate as to whether or not there are people living on the planet Mars.

Recently some scientists of recognized ability had

claimed to have secured proof that there was human life on at least one of these outer surfaces; but their announcements were received in about the same spirit as we take the protestations of Frederic Meyers and Ledbetter, that they are in communication with disembodied spirits.

However, my coming was now hailed as positive proof that this theory was entirely tenable.

On one memorable occasion, Akon told me that he was going to some distant reducing grounds, to view the reduction of large vats of material, and invited me to accompany him, assuring me that it was a very beautiful spectacle. I accompanied him the more gladly, because it would afford me a few days' respite from my studies, which I had been pursuing of late with such absorbing interest that I was not a little fatigued.

We traveled for some days in leisurely fashion, stopping at various places of interest. I only wish that there were time and space to record all the wonderful things I saw on that journey, but if I did, this necessarily brief narrative must become a book, and that book a series of volumes. So I must confine myself to the object of our quest.

Upon our arrival, we took up our headquarters at a point several miles distant from the "works." Here we found a large number of high-powered telescopes, mounted in temporary buildings resembling the general lay-out of our erst-while popular "World's Fair" expositions.

The next day we visited the works, and my companion explained their nature in technical language that rather outstripped my understanding, both of scientific terms and of engineering processes. However, this much I gleaned: the subsoil in this region was rich in elementary substances, such as we might call minerals; and from these substances, which were easily reducible, they drew among other things large stores of electrons and protons, which they combined in various ratios to produce nearly every known substance.

A PORTION of territory was selected and isolated from its surroundings by applying a concentrated ray of decomposing light upon the soil in such a way as to produce a wall or partition of decomposed soil and subsoil, from which certain elements were removed. This partition, being a non-conductor of heat and light, served to form the boundary lines of the tract to be treated. The decomposing ray was played over the surface rapidly, to form a layer of the same non-conducting material, to act as a cover or blanket to retain the gases created in the reducing process.

The container or vat thus being completed, the work of reducing the enclosed mass was begun; and a combination of heat and light was projected into the mass for weeks, from huge generators, working night and day till the entire bulk to a great depth was reduced to a molten mass of liquid charged with gas, like a submerged lake of fire. In the present case, it was several miles in extent.

When all was sufficiently melted, a huge rent was made in the surface by means of explosives, and the gases allowed to escape, as from a steel plant. It is this escape of gas that provides the spectacle so prized by the feli.

The remaining material is then allowed to cool, and constitutes a vast storehouse, which may be drawn on for substances for months, or in some cases even for years. At the appointed time we were in a vast crowd among the buildings where the telescopes were housed, prepared for a rare treat.

Suddenly, without warning, the entire sky was illuminated. After a few seconds, the sound of the explosion reached us. We saw a column of fire and smoke slowly ascending from the vat.

There were shooting rays like the Northern Lights; there were areas of dense blackness, shot through at intervals with flashes of every shade of color that the human eye can conceive. There were blazes of intense light, such as accompany bursts of shrapnel; rolling clouds of sulphur-colored gases, and in fact such a display of light and color as one might expect if all the oil wells and chemical factories in the world were all rolled into one, and all on fire at once. Then, as the flaming mass rose higher into the sky, the column gradually assumed more definite shape and color. In the center, there arose a fiery column, shooting straight toward the zenith, and on either side of this a column of less brilliance, as though the incandescent column were surrounded by a cylinder of fluorescence, which rapidly faded toward its circumference. This column was very large at the bottom, occupying a space of perhaps 15° of the circle of vision.

This diminished in size as it ascended, in the same way as the rails of a railway appear to converge in the distance, when one looks along a level stretch of track. This column grew smaller and smaller till it finally disappeared at the limit of vision.

After gazing for some time at this scene, entirely engrossed by its magnitude and splendor, I became aware that I was alone, my companions and those around me having gone in to the telescopes.

I followed after them and found them gathered in circles around the great mirrors that reflected the magnified images from the gigantic instruments. As I approached the one by which I had previously been assigned a seat beside Akon, I saw a spectacle of brilliance and grandeur rivalling anything I had ever experienced. There rose the luminous column, not as a tapering cone, disappearing in the darkness, but as a splendid creation of light and color, standing out clear and magnificent in every detail.

HOW shall I describe it? Words can only convey a most imperfect and inadequate picture. In general effect it was as though you would place a number of very tall and graceful vases, one on top of another; vases somewhat enlarged at the bottom and tapering toward the top.

I remarked to Akon that this seemed to me to be a very peculiar phenomenon; he agreed with me, and said that these enlargements occurring at regular intervals, were thought to be caused by the varying density of the successive layers of the earth. Since the volume of any gas varies in direct ratio to the pressure that confines it, whenever this gas ascends into a stratum of diminished density, it expands, producing the bowl of the vase. Then, as it rises to a greater height, it naturally appears to dwindle in size, forming the neck of the vase, till it passes through another stratum, expanding into another bowl.

Almost mechanically, I counted the successive enlargements. There were thirteen of them. Then for the second time since my arrival in this strange land, I said, "This must be the Fourteenth Earth." And

in spite of the gripping interest of the spectacle, my thoughts took a momentary excursion back to the little numbered discs in Mr. Kingston's laboratory, and I wondered if the number 14 on my tragic selection had meant a definite world to the scientist.

Then as I pondered over this, the magic stem suddenly blossomed at the top, or rather exploded like a beautiful rocket in a giant pyrotechnical display; and a murmur of awed appreciation went up from those around me, bringing back the scene on the old parade grounds, when I was a boy, watching fire works, when some piece of special merit would meet with the approval of the crowd.

The top of the column had at length reached the surface of the earth, where I had once lived; and where the heavy gases had come in contact with our atmosphere, which was much rarer than the stratum below.

Here were great luminous clouds and vivid scintillations, like many-colored stars and streaks of livid incandescence, streaming away in crooked contours, but in a general way outlining an upright, very flat cone. These streams faded in the distance till they merged with the darkness of the sky. The illumination was so brilliant, that after gazing for some time I was obliged to shut my eyes to rest them; and as I did so I became conscious that this picture bore a striking likeness to something I had seen or known about, long ago. That squat cone—the fading streams—then, like the lifting of a curtain, it became clear to me; and there flashed into my mind another picture. I saw a fiery volcano, belching forth death and destruction; with the white-hot streams of lava pouring down the mountain sides, engulfing homes and cities, and boiling into the sea. I saw a multitude of people fleeing in terror for their lives, and others faint from suffocation or perishing miserably from the heat; and hovering over all a great pall of black smoke, while a rain of cinders and ashes descended on the country for miles around.

Sick and frozen with horror, I opened my eyes to meet the beaming countenance of Akon, happy in the contemplation of this thing of beauty on the reflector. Seeing all was not well with me, he hastened to ask solicitously what was the matter. For the life of me, I could not think of one word of that wretched language with which to answer him.

As one turns away from a revolting scene, I turned away from the mirror. It no longer held any fascination for me. My companion soon followed me, and when I had composed myself enough to regain some command of his language, I told him how the by-product of their industry causes our volcanoes, and of their havoc and destruction.

He was deeply concerned, although at first a little incredulous. However, he promised to report the matter to the scientific society, and thought perhaps some means might be devised to ameliorate its effects, or possibly to do away with the eruption altogether.

Very soon after our return from the reducing grounds, the Penyon Society, my adopted parent, or rather guardian, decided to make an attempt to return me whence I came. My sudden appearance had stimulated the entire scientific world to an intense activity in the study of the possibilities of an artificial redistribution of electrons in the atom. As I have said, they were already proficient in arranging the electrons and protons in the proper ratio to form any basic substance. But to re-arrange the electrons in complex substances without destroying the shape and without reducing it to its primary elements was somewhat in advance of their progress.

THE late promulgation of the Einstein theory created a somewhat analagous stir in our world of science.

Under the urge of this stimulus, the Penyon Society, in cooperation with other research workers, had been making some very remarkable progress, and they now decided to put their knowledge to the test by constructing an apparatus that would revivify my little 14 disc in such a way that it would undo the change formerly wrought in my atomic structure. They all set to work with such vigor and enthusiasm that hardly a month elapsed before all was ready for a test of their success.

Then we again presented ourselves before the magistrate, and in language which I was now able to understand, the court was petitioned to relieve the Penyon Society of its responsibility of guardianship and permit me to submit my person, in the interests of science, to the uncertain action of this admittedly dangerous process. This petition was readily granted, and the following day was set for my departure. The Penyon Society banquetted me, and bade me Bon Voyage, with fitting ceremony; and Akon bade me good-bye with much feeling and very evident reluctance.

At the appointed hour, in the presence of a great multitude, I approached the insulating vat, and grasping old 14 with a resolute hold, I lifted the disc from its bath. I reflected how different this was from my solitary departure a year ago. Almost immediately I became aware of a rising and expanding feeling, and amid great shouts from the people, I began my ascent.

At first slowly, and then with gradually accelerating velocity, I was soon travelling at great speed, and directly commenced to experience that sense of benumbed faculties that I had felt on the downward trip; and I was only conscious of a long period of upward movement.

Then, when I finally emerged from the gloom, I had a moment of clear consciousness; then I perceived that I was restored to my normal size, and that I had popped into the air like a fragment of some very light material when it rises from a great depth of water, gaining enough momentum to carry it clear of the surface.

For a fraction of a second I hung suspended a few feet in air and then dropped with a breath-expelling plop to the ground. The next thing I knew, I was in a comfortable bed, here in this hospital, as I am told, in the little town of Wilby. Of course, no trace was left of the manner of my coming, and I have been obliged to resort to fiction to account for having been found in a bruised and unconscious condition, in the middle of a plowed field. So I have explained that I fell only a few feet from a balloon which I had invented, and with which I was making a trial flight.

I have no desire to be transferred to the psychopathic ward, where I surely would go if I were to be so rash as to tell them the truth about my adventure.

I should no doubt be judged insane without further examination and then would ensue no end of compli-

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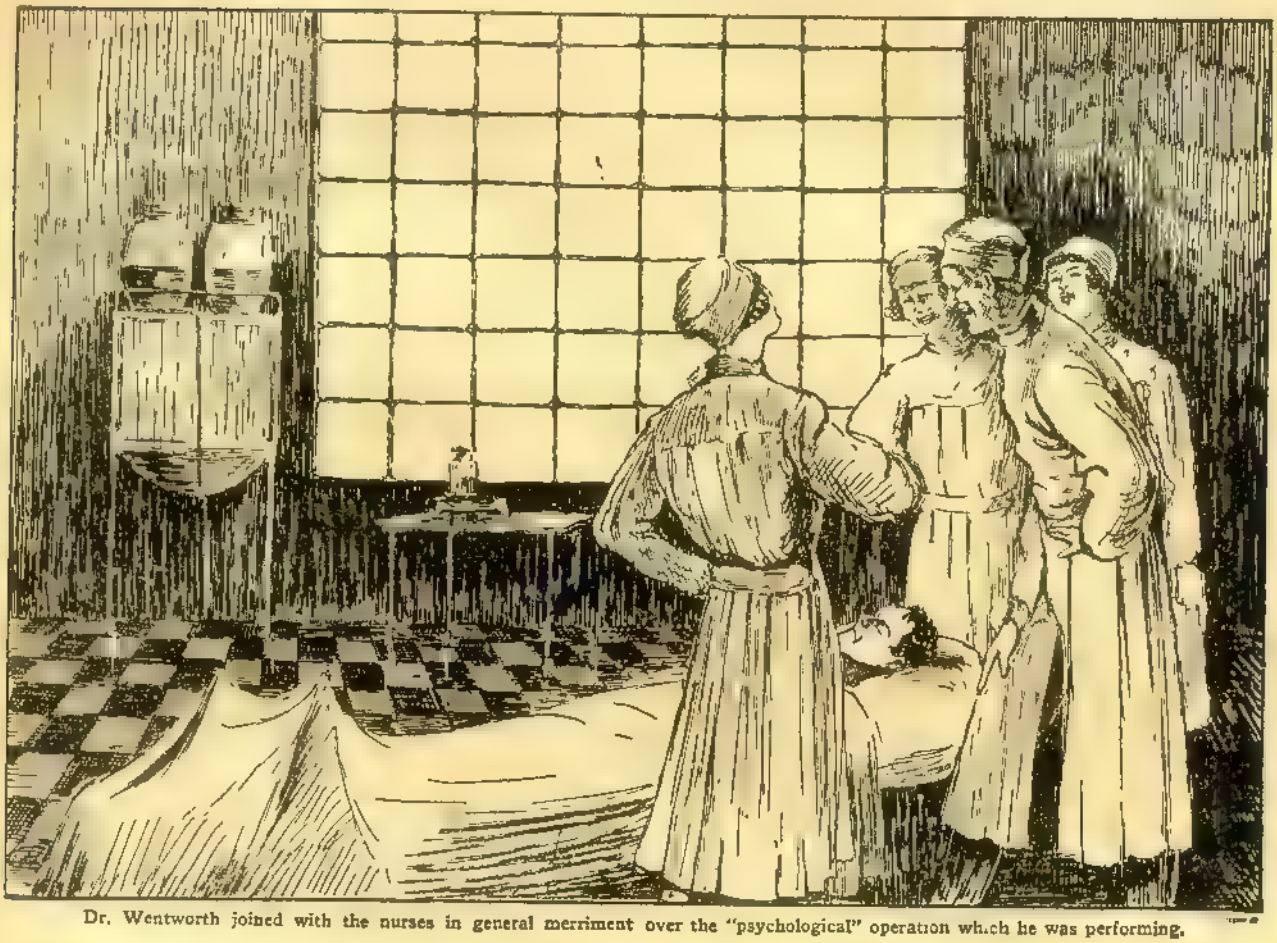
The FIGHTING HEART

by W. Alexander

Author of "New Stomachs for Old"



Dr. Wentworth joined with the nurses in general merriment over the "psychological" operation which he was performing.

TOM WILSON was a worm. he knew he was a worm, but in spite of the knowledge he seemed unable to remedy the condition. As he walked toward the warehouse, where for the past ten years he had held the position of shipping-clerk, he reflected with bitterness on his down-trodden, brow-beaten, hen-pecked existence. Here he was a man of forty in good health, with an inferiority complex so strongly developed, that he was forever cringing and debasing himself before people. It was only day before yesterday that he had said "Yessar" to the colored porter on the train as he and his wife were returning from the beach.

It made her mad and she promised to bounce a rolling pin off his head when she got him home, but fortunately, in the stress of getting supper, she forgot it.

IT is well known that some of the greatest cures have been effected psychologically. The annals of medicine are full of such cures. It is also interesting to note that sometimes the technique used by doctors in obtaining cures must be elaborate in order to bring about the expected change. How one doctor went about this, is most interestingly told by our author.

He was hen-pecked at home by his wife and brow-beaten and bullied at the warehouse by every one with whom he came in contact, from the truck drivers to the foreman. Tom was really not a bad sort at all. He was of medium height, with a round, jolly face and a bit of girth around the equator. He would have liked to be friendly with every one, but his advances were usually received with contempt by his associates.

A tremendous piece of luck had befallen him the day before—which was the cause of his unusual introspection and self-contempt on this particular morning. Just before his lunch hour on the previous day, he had received a telephone message asking him to call at once on a certain firm of lawyers. Hurrying through his lunch, he repaired to their offices and was informed that he was heir to the estate of an uncle,

who had recently died in Alaska. They stated that the estate approximated one million dollars, and while it would take a few months to comply with legal formalities before the estate could be turned over to him, they would be happy to be allowed to advance him any sums he might require.

On the impulse of the moment he "touched" them for five thousand dollars, not because he had any particular use for such a sum, but just to convince himself that he was awake and listening to a true story. He swore the lawyers to secrecy for no very well defined reason, except that he feared to have it become known that he was rich until he had time to adjust himself to the idea.

During the afternoon, after returning from his meeting with the lawyers, whenever Jim Lang, the foreman, scorched him with an extra nasty bit of sarcasm, he would slip a hand into his pocket and finger the crisp certified check for five thousand dollars, and wonder what fat Jim would say if he flashed it before his eyes. Then, after supper that night when Ann, his wife, gave him a terrible tongue lashing for breaking one of her blue saucers while wiping the dishes, he almost, but not quite, grinned in her face as he fingered the check in his pocket and he wondered what she would say, if he handed her the check in a nonchalant manner, saying:

"Here, Ann, old girl, take this and buy all of the blue saucers that you want."

A few evenings later, when he had finished wiping the supper dishes, he told Ann that he was going to step across the street to Dr. Wentworth's home, to consult him about a pain he was having in his side.

"Pain, fiddlesticks," snorted Ann. "You've been stuffing yourself with pie for lunch again, I suppose. Now don't you stay over there gossiping with that doctor, because I want you to scrub this kitchen tonight."

"Yes, my love," answered Tom meekly, "I won't be long."

"Doc," said Tom, when he was seated in Dr. Wentworth's library, "I ran over to have a little talk with you, as my friend rather than as my doctor. I told my wife that I was coming over to consult you about a pain in my side, but that was a lie, for I never felt better in my life. I don't want you to mention it to any one for the present, but I have just fallen heir to one million dollars from an uncle's estate. Here is a check for five thousand the lawyers gave me and they said I could have more if I wanted it while they were attending to the legal requirements preliminary to turning the estate over to me. I never before worried much about my 'inferiority complex' as you have called it, but now when people find out that I am rich, they will jump on me harder than ever, trying to brow-beat money out of me. I thought perhaps you could suggest something to help me."

"Well, Tom," said the doctor, "I am glad to hear that you have fallen heir to a fortune. Now about your condition; as I have told you many times, it is largely mental. You are in good health and a rather strong man for your size. In a matter of fisticuffs, you could give a very good account of yourself, if you would fight. Do I understand that you have told no one of your inheritance, not even your wife?"

"No, you and the lawyers are the only ones who know. Doc, you have an international reputation for performing unusual operations, like those stomach exchanges, for instance. Can't you do something for me—change something in me, that will rid me of this craven fear of everyone who says 'boo' to me?"

"If you are to be cured by an operation," said Dr. Wentworth, as he looked fondly at him, "there is only one that I know of that would fit your case, namely, an exchange of hearts—the exchange being made with a man possessed of what is usually referred to as a 'fighting heart.'"

"BUT my goodness, Doc, you couldn't exchange my heart with another man's without killing us both, could you?"

"Oh, yes," said the doctor with a smile; "that operation is not at all uncommon now. You see, in theory, we surgeons have always been able to perform that operation successfully, but in actual practice, the patients always died. This was true up to a couple of years ago, when Doctor Zambi, the noted French scientist, invented, or discovered, *Xerolla*. This chemical is a very powerful anesthetic, which enables us to place a patient in a state of complete suspended animation for a period of forty-eight hours, with no deleterious reaction.

"Dr. Zambi also invented, or discovered, *Collodiansy*, a combination of chemicals which, when applied to the lips of an incision, causes it to commence healing rapidly at once—is almost healed in twelve hours, entirely healed in twenty-four hours and in thirty-six hours the scars are almost invisible. With those two agents, *Xerolla* and *Collodiansy*, it has become such a simple operation that we no longer consider it in the major class. In thirty-six hours the veins and arteries, where we have made the connection with the new heart, are completely healed and in forty-eight hours, when the patient comes out of his deep sleep, it is almost impossible to find even the cicatrix of the incision in the chest."

"That sounds fine, but could you find a man with what you call a 'fighting heart' that would be willing to make the exchange? Then, too, I wouldn't want any one to know that I had undergone such an operation."

"Yes, I could find a man willing to make the exchange for a price. That is where your new wealth will come in handy. The exact nature of your operation need not be known. It could be given out that you had undergone an operation for the removal of your appendix."

"Doc," said Tom earnestly, "above all things, my wife must not know the nature of this operation."

"That can be arranged. Tomorrow morning do not go to work. Complain to her of pains in your abdomen and have her call me in. I will advise your removal to the hospital. Later she can be informed that an operation for appendicitis is necessary."

The following day these plans were carried out and from the hospital Tom sent for his lawyers and secured a further advance of funds. The next three days were spent by Dr. Wentworth, so he informed Tom, in finding just the right man for the exchange operation. During these three days Ann showed a solicitude for Tom's welfare that surprised and touched him. She called at the hospital three times each day, but by the doctor's orders was only allowed to remain a few minutes.

On the morning of the operation the doctor said to Tom:

"In these exchange operations we think it best that the patients do not meet, as it might be a source of embarrassment later, but I am going to give you a sight of the man from whom you will acquire the

'fighting heart,' because he is such a fine specimen of young manhood."

The doctor led him down the corridor and into a room in which was a door leading into the next room. The upper part of this door was of glass covered with a lace curtain.

"Look through the curtain," said the doctor. "The man with whom you are to make the exchange is standing in the next room."

Tom looked through the curtain and saw a fine looking young man, apparently an athlete. He seemed almost like a composite picture of Firpo, Dempsey and Tunney.

As they walked back up the corridor Tom said:

"That sure is a fine looking young fellow. I'll bet he can whip his weight in wild-cats. But say, Doc, when he acquires this heart of mine, how will it affect him?"

"It will have no effect whatever on his actions. There is nothing organically wrong with your heart, as I have often told you. Your trouble is largely mental. This man has the fighting mental attitude and will carry on just as he has before and your heart will function perfectly for him."

WHEN Tom came out of his deep sleep and Dr. Wentworth informed him that the operation was a complete success, he was as happy as a lark. A week later the doctor said to him:

"Tom, my conduct in the matter of your operation has been most unethical, not letting your wife know, and so on, but out of friendship to you, I am going to continue on the same lines. I am going to take a month's vacation and you and I are going to Bermuda, without your wife. When we return in a month you will be in top-hole form. We leave tomorrow, so make whatever explanations you think best to your wife."

Tom found unexpected difficulty in persuading Ann that the trip to Bermuda without her was the proper thing, but finally, with the doctor to back him up, he convinced her.

The month at Bermuda with Dr. Wentworth was a revelation to Tom, who had found little time for play in his life. The doctor taught him to play golf and they put in their days golfing, swimming and fishing.

On the morning of their return to the city Tom said to the doctor.

"Doc, the man from whom I got this heart must have been a fighting fool, for I am never so happy as when I am about to get into a scrap. Sure different from the way I used to be."

"Use a little discretion, Tom," Dr. Wentworth answered, smiling quizzically at him. "If you don't, one of these days some little fellow will come along and half kill you."

TOM went at once to his home, greeted his wife rather casually, changed to his working clothes and reported to the warehouse for work.

As soon as Jim Lang, the foreman, found a moment of leisure, he approached Tom, who was seated on his high stool at the billing desk, and took up his usual line of bickering and brow-beating.

"Say, runt," said Lang, "do you think we are going to wait all day for those bills-of-lading?"

"Now Fatty," said Tom, looking the foreman over with a mischievous twinkle in his eye, "if you think you can make these bills out faster, climb on this stool and go to it."

"Why you insignificant pencil pusher," roared the surprised Lang, for never before had this worm dared to give him a sharp answer, "if you give me any of your lip, I'll knock you for a row of ash cans."

"Atta boy Fatty," said Tom with a grin, as he climbed down from the high stool, "that's the talk I've been waiting for. Now just for that, I'm going to give you a smack."

Tom slapped him with his open hand, but so forcibly, that the unprepared Lang sat down with a bounce.

"You will notice, my dear Fatty," said Tom, as he stood over him, "that I merely patted you with my open hand."

"When I get up," said the fat foreman, as he struggled to get his feet under him, "I am going to tear you apart."

"Oh no you are not," answered Tom, laughing happily, "because I am next going to lay my fist carefully on the side of your jaw, to help pay for all these years of misery you have caused me."

When Lang finally succeeded in regaining his feet, he made a rush at Tom, swinging his arms wildly, but missed him and received a resounding whack on the jaw, that dropped him as though he had been shot.

"Now you truck-hogs," yelled Tom, at the truck drivers who were looking on in amazement at this unexpected conduct of the heretofore worm of a shipping-clerk, "carry this carrion over to that corner out of the way and then snap into getting these goods for the depot on your trucks. Lively now."

The truck men went to work with a will, loading the packing cases on their trucks, casting side-long glances of bewilderment at the belligerent shipping-clerk.

"Here you, Jones," called Tom to one of the men, who had paused for a moment to rest, "what do you think this is, a picnic?"

The man looked at him insolently, spat on the floor, hitched up his pants, but made no move to resume work.

"I was just hoping that you would give me an excuse," said Tom, with a happy laugh as he walked toward him. "It's many years you have been stepping on the worm. Now the worm has turned."

With that he struck the fellow a clout on the ear, that caused his head to rock and made him see stars.

"Get busy," chortled Tom, with huge enjoyment, "or I'll give you the other barrel."

One barrel was evidently enough, for the fellow proceeded at once to load his truck. As Tom returned to the billing desk, he noticed Mr. Davis, the president of the company, standing just back of it with a grin on his face.

When the last truck was loaded, Tom addressed the men:

"You truck-hogs have been taking entirely too much time to make the trip to the depot and back. I am giving you just one hour to make the round trip, one half of the time that you have been taking. The man that is late in getting back, is going to have a fight and I will add that there are three of you that I am hoping will be late. Now get going."

"Tom," said Mr Davis, the president, as he was climbing back to his stool, "come into my office for a minute I want to talk to you"

"I noticed how you handled those drivers," said the president, when they were seated in his office.

"You have been with us for ten years and in appreciation of your faithful service I am going to promote you to foreman, at double your present wages."

"Oh you are," said Tom, with a menacing glare, "it's taken you a damned long time to find out what a faithful fellow I am. You have never raised my wages a nickel since I have been with you. You have never even seen me in the warehouse enough to say 'Good-morning.' I don't like you, I don't like your face and especially your nose. I have dreamed many times in the past years of pulling it and right now is when I make one dream come true."

Tom reached across the desk and took a firm grip on the president's aristocratic nose and gave it several severe tweaks. Then he slowly twisted it until the tears ran down the man's face and a groan of anguish escaped him.

"Bye, bye, old dear," said Tom, as he walked to the door. "As Barney Google would say, 'I hope you don't feel hurt.'"

HE walked home through a drizzling rain and when he entered the house, he smiled as Ann greeted him with her usual avalanche of abuse.

"Say, do you think you are coming into a barn?" demanded Ann. "Go right back out on the porch and wipe your dirty feet. Do you think I have nothing else to do but clean up after you?"

"Whom do you think you are talking to," exclaimed Tom, as he took hold of her shoulders and shook her until her teeth rattled. "I'll teach you to stand around jawing instead of getting my supper. Now get it on the table and make it snappy and after this you had better have it ready when I get home. What's the idea of a tired man having to wait for his supper when he gets home from work?"

"Sit down dear," whimpered Ann, as she banged pots and pans around on the stove in mad haste, "I'll have it on the table in just a jiffy."

As Tom ate his supper in dignified silence, she hovered around him like an uneasy mother.

"Is the soup hot enough, Tom dear?" she asked. "Wouldn't you like another piece of this pie? It's your favorite kind."

"No more," said Tom, glancing at her in astonishment, for it had been a long time since she allowed him to have more than one piece of pie at a meal.

"Get these dishes washed and wiped in a hurry," he told her when he had finished, "then come into the front room; I want to talk to you."

"All right dear, I'll be through in a moment." But she said not a word about his wiping the dishes, which had been his custom for years.

When she came into the front room, she seated herself on the arm of his chair, ran her fingers through his hair, then pressed her cheek against his head. He tilted back his head so that he could see her and began:

"Now Ann——," but got no further for she stooped swiftly and pressed her lips to his in a kiss, such as he could not remember receiving since the days of their honeymoon. Finally she slid into his lap and he proceeded.

"Ann I am now a wealthy man, an uncle whom I had not heard of for years died in Alaska and left me a fortune. I have engaged passage for you and me on a boat that leaves for Europe in three days. Tomorrow I want you to go to a beauty parlour, get your hair bobbed and your face prettied up like other women do. Then get yourself some proper traveling clothes; you can get more when we reach Paris. You have gotten too careless about your appearance. You are a darned good looking woman and need only fix yourself up properly, which is just what you must do in the future."

"All right, my love," cooed Ann with a happy laugh. "I'll get dolled up tomorrow so you won't know me."

Three days later they stood by the rail and waved to Dr. Wentworth as their ship glided away from the wharf.

"Oh, I almost forgot," said Ann, handing Tom a slip of paper, "Dr. Wentworth asked me to give this to you after the ship left the wharf."

Tom took the paper and examined it with a puzzled expression. It was a certified check made out to Dr. Wentworth for the sum of five thousand dollars. Tom had gotten it from his lawyers for the Doctor, to pay for the operation. He turned it over and on the back it was endorsed: "Pay to Tom Wilson" and was signed "Dr. Wentworth."

Below the signature was written in the doctor's fine hand: "I can't accept this, Tom; wouldn't be ethical, as I have not yet hung out a shingle as a *psychologist*, but the point is, you are cured, even if you still have your own heart—which, by the way, you have proved to be equal to *any*."

THE END

Ourselves

—*By* Leland S. Copeland.

Born of earth and sunshine,
  Drawn from ages past,
You and I inhabit
  Planet Three at last.

Savage, saint, and thinker
  Mingle in our mind;
Swayed by ancient urges,
  Our wee lives unwind.

Changed to light and stardust,
  We at length must drift
Over void and darkness
  Down a stellar rift.

Ere we travel blindly
  Through the starred abyss,
Seize and share the joy of
  That expanse and this.

SMOKE RINGS

by George-Mc Loclard

A low hiss arose as the gas escaped from the well and there rose into the air the most perfect ring I had ever made, so black and opaque that it was more like a ring of steel than a flimsy gas ring. And then I saw something that froze the blood in my veins. High above the rising ring was the long, slender shape of a zeppelin.

THE quiet of the dreamy Sunday evening was shattered by the shrill rise and fall of the siren of the fire-fighting patrol as it dashed through the residential section of the little town towards the road leading into the country. The heavy trucks jounced and pounded their way down the sandy road in the direction of the red smudge that lit up the heavens. Soon the machines dashed into a farmyard and slid to a groaning stop near a large, three-story barn, flames roaring and writhing from its numerous apertures. The firemen dropped the end of a hose into the well and began pumping water into the burning structure. A few minutes later the pumps sucked air—the well was dry! Unable to do anything more, the men stood around, staring fascinated into the flames that licked the inflammable wood and rose in a crimson tower against the starry heavens.

High up on the burning barn, one of the men spied a figure with arms crossed and contemplating the growing crowd below. The man shouted his discovery. Ladders were quickly raised and placed against the barn. A fireman was about to ascend when the figure raised his hands in a commanding gesture and shouted, "Go back, you fool!" At the same time he kicked the ladder away from the cornice. Heeding the command, the men dropped back. The man disappeared and soon reappeared with a small steel box, which he tossed to the ground. There was a scurry for it, but the chief of the firemen managed to get possession of it. The man returned to his former position—a proud spirit awaiting his doom; arms crossed and head high—outlined against the advancing flames.

A dull rumbling warned the spectators of the immediate collapse of the barn. All eyes still riveted upon the proud figure, the walls crashed inward, raising great clouds of sparks that circled over the burning ruins. A great sigh arose. A man had died resisting succor. Why? That question was uppermost in

HERE is one of the best short scientifiction stories we have published in a long time. If you have ever blown smoke rings with your cigar, cigarette or pipe, you may have wondered about the science behind them. These smoke rings, by the way, have been used a great deal the latter part of the last century to fight hail storms, particularly in Europe. Especially in Italy, cannons trained vertically pointing to the sky could be seen practically near all the large vineyards, ready to be shot off at the appearance of black clouds. The cannons themselves were of the usual mortar type with a funnel-shaped mouth extension of steel about 10 feet high. Smoke rings of tremendous power were generated with the shooting off of the cannons. Although used for many years, these cannons have gradually fallen into disuse because the effects were not all that could be desired.

the minds of all who had witnessed his death.

When the answer, revealed by the contents of the steel box, came a few days later, the whole world knew—gasped with surprise and amazement—and disbelief. It bordered upon the fantastic. Yet, it was true—as true as the fact that night follows day.

Here is the story, revised and checked by the Government officials who say that this revelation has cleared a puzzling mystery and is bound to bring about a great change in the matter of future warfare.

* * *

I HAVE done it! But at what cost! Intending that it should be used to protect my own nation, it has struck back, killing and injuring those who are my own countrymen and friends. Oh! that man could see what Fate has in store for him! How could I know that Fate would hurl into the path of my instrument of destruction, while I was testing it, the thing I would not for a moment have thought of injuring? Fate!

Let me first say a word or two about myself and my history. I am Wilbur Gunderson. Poor and uneducated beyond the country grammar school, my parents were of the average farm type, living in southern Michigan. Having had nothing but the meager education that the country school could give, I went to the city of Chicago, where I attended night school and picked up a rather substantial education. When the war broke out I went to France as an anti-aircraft gunner. Between sighting and shooting at enemy planes, I would lie on the ground smoking those black, offensive ropes that the French Supply Corps called cigars. Blowing rings and watching them as they ascended into the breeze, where they were torn to shreds, I dreamed of home and peace. Once, while in such a mood, a dragon-fly darted across the road and poised for a moment above the exact center of a smoke ring. Then was the *idea* born. The dragon-fly was an airplane and the smoke-ring was some gaseous, yet substantial material. It would be a simple matter to bring down enemy planes then! Such at least was the suggestion. The ring, in rising, would be sure to spread over a vast area and cause considerable disturbance in the air about it.

That idea came to my mind many times after I had returned to the States. I made mental plans about the completion of the machine. I studied the operation of the human mouth and throat while forming rings. When the plans were finally developed to the point where I believed it warranted an actual experiment, I went to Ava, Ohio, where I thought I would be able to experiment without interference or danger. Why I should have selected Ava of all places, I will never know.

I rented a huge three-story barn three miles from the nearest farmhouse and began to gather my machinery for turning out smoke rings. My early experiments were successful in a way. I made a few rings hundreds of feet thick and a mile or more in diameter, but they were of gas and lacked solidity—a very necessary requirement. I remember the furore that was created in Ava the night I sent up a ring composed of explosive gases; the ring shot to a height of two miles, spreading out to a diameter of five miles, and there ignited. The explosion lit up the whole country-side Always, for the sake of safety and secrecy, I carried these experiments on at night. Also, I was not at all sure as to how the world at large would accept the idea of a man secluding himself in the country for the mere purpose of making smoke rings.

Then came real development. I spent many weeks digging and walling a shaft thirty feet deep into the hard ground and rising twenty feet above the roof of the barn. This shaft was the exact center of the 'ring apparatus.' In the early hours of September 3d, I made the finishing touches. Anxious to see my latest scheme at work, I determined to give it a trial test then. As I scanned the heavy leaden night heavens, I noticed that a storm was approaching from the north. Now and then the moon broke through the hurrying clouds, lighting up the dark landscape in weird patches of light and shadow. Over the distant town of Ava, the lightning flashed and rumbled. The air was chill and I felt a vague oppressive weight descending upon me. However, I shook it off, and turned my mind to the work on hand.

"Great," I thought, "if all is to the good, I'll bore a hole a mile in diameter through those clouds overhead." Running to the switchboard, I threw in the switches controlling the many air pumps and for almost an hour the pumps kept up their maddening, thump, chug, thump, chug as they filled the gigantic tanks.

Then the valves were opened, letting the hot moist ring-gases fill the central well. Going up to the roof to see if the clouds were dense enough, I made sure that the well cover was tightly closed. Reassured, I opened the compressed air tanks, thereby admitting compressed air into the well and placing the ring-gases under tremendous pressure. The air was the initial propellent. I waited a few minutes and then I pulled the release cord. A low hiss arose as the gases escaped from the well and there rose into the air, the most perfect ring I had ever made, so black and opaque that it was more like a ring of steel than a flimsy gas ring. Swiftly and silently it rushed upwards, growing larger and larger.

And then I saw something that froze the blood in my veins. High above the rising ring was the long slender shape of a Zeppelin outlined in the break of the clouds. The moon shone on her sides for an instant, then all was black, even the ring was lost to my sight.

Lightning flashed close by and rain began to patter on the roof. I stood as in a trance, in a horrible nightmare, hoping and hoping against hope that my engine of destruction was a failure. I stood there, I know not how long, it might have been centuries, before I was awakened from my stupor by the heart-rending crash of a metal body meeting the unyielding earth.

I found myself dashing across the fields, through groves of trees, slipping in muddy ditches, as I made my way in the direction of the crash. I came upon the scene and stopped, overcome by horror. Slowly, the realization of what I had done gripped me. I had done it! I! "You murderer!" screamed the crushed and torn framework of what had once been the pride of America The ghastly severed girders stretched their long pointed fingers accusingly at me I stood for hours brooding over the ruins The milling crowd, which quickly gathered, darted here and there in a sort of a daze, excited and horrified by what they saw.

On my way back to the accursed barn, I came upon a group of men removing an engine from a half-buried gondola. The souvenir collectors were even then at work.

That was months, years ago. I dared not tell that I had sent the *Shenandoah* to her death. No, I would have been thrown into some asylum. I kept my silence and awaited with sad forebodings the result of my terrible act. Yet, was I to blame? I see the set-back I have caused aeronautics. The world thinks the *Shenandoah* was not strong enough to withstand the attacks of the elements. I know better. There is not an airship built and never will be, that will withstand the terrific concussion of a smoke ring. Airplanes, too, become unmanageable in the clutch of the ring.

It was a gas ring that destroyed the *Shenandoah*, not the storm.

THE END.

POLLOCK AND THE PORROH MAN

By H. G. Wells

(*Continued from page* 1077)

doubt at his heart. Presently the doubt was irresistible. He got out of bed slowly, shivering, and advanced to the jar with his hand raised. Surely he would see now his imagination had deceived him, recognize the distinctive sheen of bronze. At last, after an age of hesitation, his fingers came down on the patterned cheek of the head. He withdrew them spasmodically. The last stage was reached. His sense of touch had betrayed him.

Trembling, stumbling against the bed, kicking against his shoes with his bare feet, a dark confusion eddying round him, he groped his way to the dressing-table, took his razor from the drawer, and sat down on the bed with this in his hand. In the looking-glass he saw his own face, colorless, haggard, full of the ultimate bitterness of despair.

He beheld in swift succession the incidents in the brief tale of his experience. His wretched home, his still more wretched school days, the years of vicious life he had led since then, one act of selfish dishonor leading to another; it was all clear and pitiless now, all its squalid folly, in the cold light of the dawn. He came to the hut, to the fight with the Porroh man, to the retreat down the river to Sulyma, to the Mendi assassin and his red parcel, to his frantic endeavors to destroy the head, to the growth of his hallucination. It was a hallucination! He *knew* it was. A hallucination merely. For a moment he snatched at hope. He looked away from the glass, and on the bracket, the inverted head grinned and grimaced at him. . . . With the stiff fingers of his bandaged hand he felt at his neck for the throb of his arteries. The morning was very cold, the steel blade felt like ice.

THE END.

READERS' VOTE OF PREFERENCE

Stories I Like **Why:**

(1) .....

(2) .....

(3) .....

Stories I Do Not Like: **Remarks**

(1) .....

(2) .....

Do you want the questionnaire to continue? .....

Do you like the illustrations as we have them now? .....

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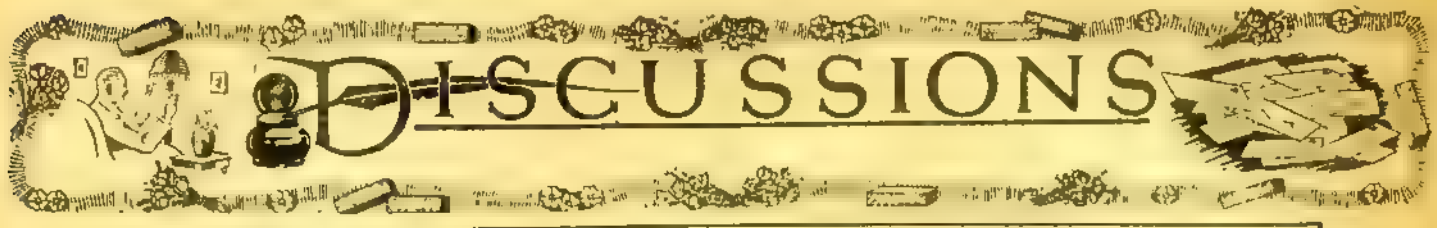
THE FOURTEENTH EARTH

By Walter Kateley

(*Concluded from page* 1098)

cations and inconvenience; and what is more deplorable, the scientific value of this experience would be jeodarized to such an extent that it might conceivably be entirely lost. I have asked for writing materials, saying that I wished to write some letters, and I am about to have this report mailed together with other letters; and I trust it will find its way to its proper destination.

THE END



In this department we shall discuss, every month, topics of interest to readers. The editors invite correspondence on all subjects directly or indirectly related to the stories appearing in this magazine. In case a special personal answer is required, a nominal fee of 25c to cover time and postage is required.

THE MOST EXHAUSTIVE CRITICISM OF OUR WORK FROM AN APPRECIATIVE READER

Editor, AMAZING STORIES:

Dear Sir: It strikes me as interesting, from a psychological standpoint, for so many of the readers of AMAZING STORIES to peruse each issue carefully, then to write to you and criticize the stories because they are very imaginative and improbable. These are the qualities that do much to interest me in the stories. The readers criticize certain points of certain stories as being impossible because "it is against the law of gravitation," or for some similar reason. What do they read the magazine for? It is fiction, and fiction can be as wild as possible. Neither is it necessary that it be possible for a story to happen—impossible themes are very interesting.

I will be well satisfied if you continue the magazine as it is now in almost every respect. You have a fine balance of serials, complete stories, new ones, and reprints. The covers and illustrations are fine and very interesting. Your comments on the stories, and the "Discussions" column are satisfactory. In my opinion, the magazine shows long, seasoned judgment in its arrangement; also, your very friendly attitude in your comments on the various matters gives confidence and creates friendship. In particular, I am pleased with your policy of labeling all continued stories as such, with the number of installments. So many magazines start a story and the reader does not know if it will continue for two issues or twenty-two. I read all the continued stories, but never until I have the issues containing all the installments (unless, by mistake).

I seem to be naturally interested in science. When barely in my teens I took up the study of astronomy and observing, and absolutely unaided, except by books, I located *all* the constellations of the Northern Hemisphere, so that I might say I could "call the stars by name." I went into the subject thoroughly and deeply. Then, about a [illegible] ago, while in the Navy, I was at the Naval [illegible]ry at Mare Island for about a year, all [illegible]ing on the scientific work there, such as [illegible] observations, time reduction, chronometer [illegible]ar son, and observation (for my own interest) through the five-inch telescope they had, built in 1873 by Alvan Clark for the observation of the transit of Venus. While at the Naval Observatory I had the privilege of being secretary to Captain T. J. J. See, in charge, and I found him to be one of the most honorable, and high idealed men I have ever known, with a beautiful character and scientific ability which will rank with the greatest of all. In the past few years I have entered other [illegible] but still have a great interest in science. (Note: I might remark that the Naval Observatory at Mare Island, California, is primarily a time station, doing chronometer comparison for the Navy and sending out time signals, and is not a regular stellar observatory, neither the telescope nor surroundings being suitable). In addition to the above, I was lucky enough to go below the equator, where I could observe and learn most of the southern constellations.

[illegible] paragraph is rather detailed, but I [illegible] to show that I have [illegible] appreciate good scientific [illegible] when I see them. I have read AMAZING STORIES from the first and have every issue. It [illegible] satisfaction for me to write this letter now—not that I [illegible] expect to influence the policy of your magazine (which I do not wish to change), but because it is a pleasure to recall the stories read in it, and how they affected me.

Starting with the very first issued, APRIL, 1926, I was glad to get, in a convenient form, the Jules Verne story, "Off on a Comet." Verne is not quite so easy for me to read, as when I first perused his stories, and some years ago I read practically every one that was available in this country. But it is a great satisfaction to have many of his works on hand, and I am apt to go back and reread them at any time.

In "The Man from the Atom" and "The Thing from—Outside," you have stories of superlative merit. The latter one is suggestive of Algernon Blackwood's "The Willows," which is a type of story I like perhaps better than any other kind, or almost as much as any other kind, at least.

The story, "The Man Who Saved the Earth," did not appeal to me, and it was about the last one I would have picked for republication in the first Annual." Not so much was it the plot, as the technique, I think one might say. Too much working of Providence, and Fate, and even the beginning, and broken sentences. However, I will reread it sometime, and probably like it better.

When reading AMAZING STORIES, I mark the stories when I finish them, using marks to show how much I liked them. For instance, the figure "1" means the story is good enough to merit my attention, "2" is good, "3" is very good, "4" is excellent, and "5" is the highest degree. Then later on, I can tell what stories I wish to read. "The Man from the Atom" and "The Thing from—Outside" are of the fifth degree.

In regard to Poe, and Wells—more later.

In MAY, 1926—"The Man from the Atom," a sequel to the one in the previous issue, is also of the fifth degree. "The Crystal Egg," with the fine cover illustration, was noticeable, but seemed to consist in somebody looking into a crystal and seeing a Martian landscape, which was weird enough, but nothing happened, and it was very weak as to plot. "The Infinite Vision" seemed rather purposeless also.

In JUNE, 1926—"The Coming of the Ice" is of the fourth degree, next to the best. "Whispering Ether" was an interesting story. "The Runaway Skyscraper" was of the fifth degree, and I only wish it were longer. "Mr. Fosdick" and "An Experiment in Gyro-Hats," and similar stories, furnish a kind of comic relief, which I will read, but a humorous scientific story or ghost story seems to be rather anomalous. Personally, I am not attracted by them, though many others like them. "The Malignant Entity" is of the fifth degree, though I had read it previously. The criticism of the comic relief stories does *not* apply to "Dr. Hackensaw's Secrets"—they are so full of ideas that I consider them to be very valuable.

JULY, 1926—"Station X" is of the fifth degree and shows great thought and ability. The "Moon Metal" was very interesting, as was "The Magnetic Storm," both of which are of the third or fourth degrees. I thought "The Eggs from Lake Tanganyika" was interesting, but not particularly noteworthy.

As for Wells—I wish to cover all his stories in the latter part of this letter.

AUGUST, 1926—"Columbus of Space" is good, but there seems to be a lack of drag in most interplanetary stories—the formula being almost always about the same, consisting of a weird cylinder, near death from bombarding meteors, etc. I "The Talking Brain," we have a story of the fourth degree (all these graded in my estimation, of course), which was horrible and attractive. Continue publishing horrible stories once in awhile. They can't be worse than much of actual life. [illegible] also noteworthy. [illegible] [illegible] [illegible]

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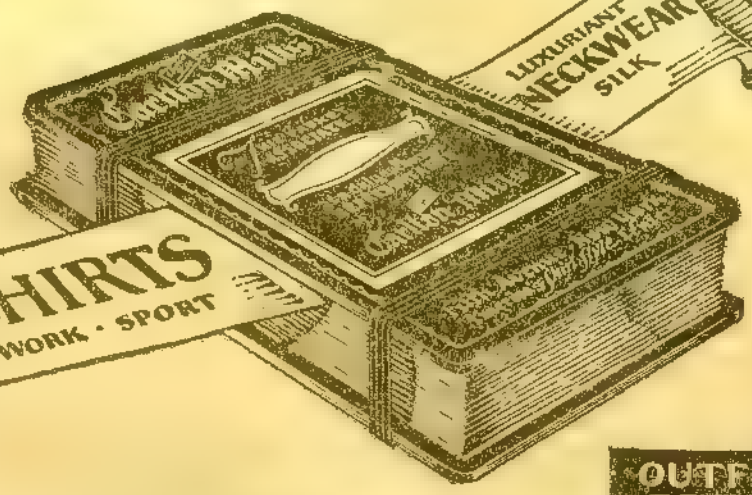

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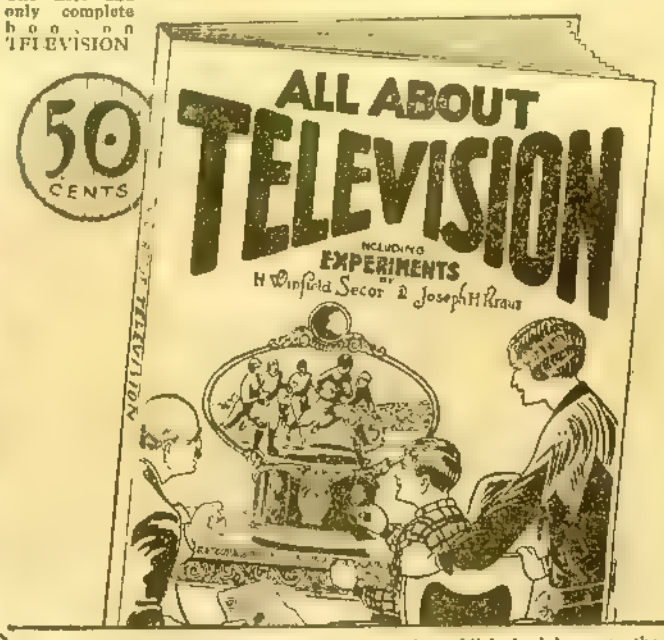

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thought. "The Four-Dimensional Roller-Press" was worthy of re-reading.

JULY, 1927—"Radio Mates" was interesting, but rather obvious.

AUGUST, 1927—"The Tissue-Culture King" was ... Moreau." by Wells. "The Retreat to Mars" ... though (this "though" is deliberate) it is interesting. "The Chemical Magnet" stands high, and gives an excellent new idea. Again, A. Hyatt Verrill kept up to his high standard, in "The Ultra ... Elixir of Youth."

... "The Stone Cat" was very ... interesting. "The Radio Ghost" ...

How anyone can criticize unfavorably "The Colour ... It is of that superbly fascinating type of stories like "The Willows," by Blackwood, and "The Thing ... This ... is wellnigh perfect, both as to plot, technique and ending. Now if H. G. Wells could make anything as worthwhile as "The Colour Out of Space," he ... to ...

... 1927 ANNUAL—I hope that the next annual ... publish contains only new stories—I mean, ... published in AMAZING STORIES. And I wish it came twice a year. "The Master Mind of Mars" is as good as any Burroughs' story, and I think it is better than "The Land that Time Forgot." I agree with a letter in November, 1927 ... another story, a sequel to both (and possibly combine "The People of the Pit" with them). They're all magnificently well done.

OCTOBER, 1927—"Around the ... was good, though I am rather ... filled with too much slang and poor ... Referring of course, to "Tubby," who was rather illiterate. If the characters are illiterate, do not let them talk too much. However, this story was very satisfying. "The Winged Doom" had one particularly noteworthy idea—the destruction of the airplanes by exhausting the air pressure around them for an instant, thus making them fall, and causing their annihilation when striking the air again. I have not read "Treasures of Tantalus" yet, but it ...

... "The Astounding Discoveries of ... in the November, 1927, issue. I will have to re-read it and meditate carefully upon it. However, after a first reading, I might call attention to the fact that, in Spanish, Fenomeno Mentiroso, means "Phenomenal Liar," and the "Esnesnon" substance is "Nonsense," spelled backwards, and that Dr. Liar is a big spoofer; furthermore, that the story is rather a *Pons Asinorum*, ... Dr. Liar seemed not so much to be a ... a D——— Ph———! He seemed to be reasoning from faulty premises, something upon the order of the fallacious syllogism:

"Nothing is better than Wisdom,
Dry bread is better than Nothing,
Therefore, dry bread is better than Wisdom."

Now for Mr. Herbert George Wells. ... and many of us share the same opinion regarding H. G. Wells. You just know his characters as a ... as a rule, unnecessary ... stories, instead of ... such as we find ... and plodding, and plain British "stodgy." He does reach a high level in "The Time Machine," with its ... "The First Men in the Moon" was interesting. But "The War of the Worlds" the great mystery to me is *how* he could establish a reputation upon ... Rather ... filled full of dumpy, sloppy descriptions which drag terribly. They are so painfully put together, that he gives one the impression that he was *forcing* himself to write, and just to fill space. Most of his stories have fine plots, but the technique of Wells is irritating to me. Without the ability of character development of Scott or Dickens, he yet ... the nineteenth century tiresome style. I think he has us buffaloed, or he *thinks* he has, but I, for one, see through Herbert George Wells. If I read "The War of the Worlds" right, it seems that accounts filtered out from the vicinity of where the Martians first used their death ray, telling of great death and destruction. *But none of the population of the other places was interested at all.*

I like England and the British nation, and though they may be rather dull at times, they are not as dopey as Wells makes them out to be, in their handling of the Martian invasion. Furthermore, *what were the other nations of the earth doing while Great Britain was undergoing this trouble?* Wells blithefully ignores this most important part ...

... I usually read most of the stuff by Wells ... published, and am glad to have it. But he certainly does not rank as high as many of the other authors whose works you publish.

I think that A. Hyatt Verrill is as good as any author ... AMAZING STORIES, of whose stories you have published several. H. P. Lovecraft is also ... ("The Man from the Void")

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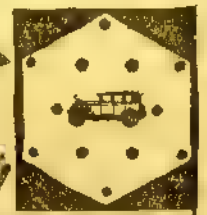

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"Station X," July, 1926. "The Moon Metal," July, 1926.

"The Talking Brain," August, 1926.

"Beyond the Pole," October, 1926.

"The Island of Dr. Moreau," October, 1926 (Wells, by the way)

"The Second Deluge," November, 1926, and later Actually the most interesting and fascinating story published to date in the magazine

"The Time Eliminator," December, 1926

"The Man Who Could Vanish," January, 1927

"The Thought Machine," February, 1927.

"The Plague of the Living Dead," April, 1927

"The Time Machine" (Wells again), May, 1927

"The Moon Pool," May, 1927.

"The Voice from the Inner World," and "Lost Continent," July, 1927.

"The Ultra-Elixir of Youth," August, 1927.

"The Colour Out of Space," September, 1927.

"The Master Mind of Mars," in the 1927 ANNUAL

This will be quite a job for you to read, and I would not blame you for not doing it, but it is a satisfaction for me to write it. (As for Wells—he really is a good author, but some of his stories are punk.)

With best wishes for your continued success,

Eugene L. Middleton,
1284½ W. 23rd Street,
Los Angeles, Calif.

[To us, as editors, this letter is most interesting. Our innate modesty is such that it impresses us as flattering. But our kindly critic puts a good element of spice into what he writes, and what he says about Wells. This author may be stodgy and British in his ways as a writer, and his work may be in the nineteenth century style, but you must remember that Wells, and much of his work, certainly belongs to the twentieth century, for what he writes is tinged with an aspect of certainty, which affects far too much the work of many authors of the present day. The fact that Wells is a prolific author and has so much public appreciation can only mean one thing, and that is, that the public likes him. The object of AMAZING STORIES, of course, is to please as many readers as possible, and Wells certainly seems to have the knack of pleasing a large circle of admirers.

Your account of your work at the Island observatory is interesting, calling to mind the famous Alvan Clark, from whose shop in Cambridge, some of the world's finest lenses for astronomical work were turned out. In one of your sentences you say, "In regard to Poe, and Wells—more later." But you don't tell us any more about Poe. We certainly would be very slow to put Wells on a par with Scott or Dickens, but he is individualistic enough to be exempt from such a comparison.

We note what you say about Dr. Menitrose. We did not give the origin of "Esnesnon," as we wished to leave it to our readers to puzzle out. It is in line with the country of "Erehwon," in Samuel Butler's famous novel, which you will observe is "Nowhere" spelled backwards. We certainly accept your conclusion that the doctor deserved this name, but perhaps are too charitable to wish to give him the degree you assign him of D——— Ph———. —EDITOR.]

WHAT A READER OF THE FAIR SEX THINKS OF H. G. WELLS

Editor, AMAZING STORIES:

After reading the "Discussion" column in your November number, I feel that I must either write this letter or burst.

Do you only print letters that abuse Mr. Wells? I have been under the impression that he is to be classed with Shakespeare and Dumas and Dickens. Why, every time I read one of the letters that endeavor to criticize Mr. Wells' works, I experience a chilling shock.

The first time I had ever heard of this AMAZING STORIES magazine was when my favorites were not in stock. I looked around for something else that was not too sickening and, glancing through one of the copies of AMAZING STORIES, I saw "The War of the Worlds." Of course I had already read this story at least two times, but one does not snub a friend because he has seen him before, and I joyfully added your magazine to my very small collection of monthlies.

I have looked forward to reading AMAZING STORIES and will be glad to buy it as a semi-monthly or even weekly magazine.

(Mrs.) E. Grunt
3693 Hudson Boulevard,
Jersey City, N. J.

[We agree with you. We are glad to find that Mr. Wells has a champion in the fair sex. We are delighted to see that you have read and re-read "The War of the Worlds," the story which has excited some unfavorable criticism, and to our mind unjust criticism, from some of our readers. There are several things which it takes a skillful writer to get into a story. One of these is conversation between the characters, another is detail enough to give it life, and another is to skillfully use local color. We do not think that Mr. Wells' work is lacking in any one of these qualities.—EDITOR.]

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I have not written since I received the big set. I can still say that it far exceeded my anticipations. Since I have been studying with your school I have been appointed chemist for the Scranton Coal Co. testing all the coal and ash by proximate analysis. The lessons are helping me wonderfully, and the interesting way in which they are written makes me wait patiently for each lesson.—MORLAIS COUZENS.

I wish to express my appreciation of your prompt reply to my letter and to the recommendation to the General Electric Co. I intend to start the student engineering course at the works. This is somewhat along electrical lines, but the fact that I had a recommendation from a reliable school no doubt had considerable influence in helping me to secure the job.—B. VAN BENTHUYSEN.

So far I've been more than pleased with your course and am still doing nicely. I hope to be your honor graduate this year.—J. M. NORKUS, JR.

I find your course excellent and your instruction, truthfully, the clearest and best assembled I have ever taken, and yours is the fifth one I've studied.—JAMES J. KELLY.

From the time I was having Chemistry it has never been thus explained to me as it is now. I am recommending you highly to my friends, and urging them to become members of such an organization.—CHARLES BENJAMIN.

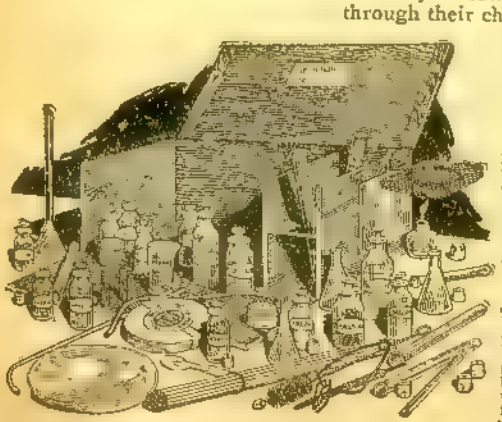
I shall always recommend your school to my friends and let them know how simple your lessons are.—C. J. AMDAHL.

I am more than pleased. You dig right in from the start. I am going to get somewhere with this course. I am so glad that I found you.—A. A. CAMERON.

I use your lessons constantly as I find it more thoroughly than most text books I can secure.—WM. H. TIBBS.

Thanking you for your lessons, which I find not only clear and concise, but wonderfully interesting. I am ROBT. H. TRAYLOR.

I received employment in the Consolidated Gas Co. I appreciate very much the good service of the school when a recommendation was asked for.—JOS. DECKER.



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THE END OF THE HERO IN MANY STORIES, "THE WAR OF THE WORLDS"

Editor, AMAZING STORIES:

I have just finished the November issue of your magazine and have some criticisms to make. In *The Machine Man of Ardathia* the author has had the character go insane. Perhaps this is making it go a little too harsh, but in many of your stories the hero either goes insane, is killed or else disappears and is not seen thereafter. This is especially true if the main character is an inventor. Witness *"The Lord of the Winds," "The Discoveries of Doctor Mentroso," "The Columbus of Space,"* and many others. In most of such stories this unhappy event absolutely prevents a sequel being written to the story. *"In the Abyss"* is another instance. To a story like *"The Moon Pool"* a sequel might easily be written. And, by the way, I regard the latter story as the best that has ever been published in AMAZING STORIES.

However, I am wandering from my subject. I wish to compliment you on the way you are making your magazine thinner.

When I first saw your November issue, I thought that it did not contain as many pages as before, but investigation disclosed that there were as many pages as in any of the previous numbers. I appreciate the thinner paper as I am having my magazines bound, and the compactness will be an advantage. I regard A. Merritt as the best author that you have, with H. G. Wells as the next. My main objection to the latter author is that he draws out his stories too much. In "The War of the Worlds" he sure has a rotten army. Of course, no army could stand long against the Heat-Ray, but they surely should have given a better account of themselves than they did give. They could have put on gas-masks to protect themselves from the "black smoke," they could probably have exterminated the Martians if their guns were any good at all, and if not, could have sent up dirigibles or airplanes, with bombs. Then, too, the Martians would probably be no more immune from poisonous gas than the Earthlings, and the defensive army could have sent out poison gas on their own account.

But aside from minor faults like this, the story was excellent, and proved interesting reading.

Would like to see AMAZING STORIES come out as a semi-monthly.

F. P. Swiggett, Jr.,
Plaza Hotel, Las Vegas,
New Mexico.

[In fiction, you will find it very usual to end a story with the death of the hero. Another usual ending is a happy love affair. But AMAZING STORIES, is not addicted to love stories, as they do not usually harmonize with scientific themes. Concerning the "War of the Worlds," that very interesting story was written before the days of effective dirigibles, before there were any airplanes, and before anybody ever heard of poison gas, as used in warfare. You give Wells a very high place, in spite of your criticism of the "War of the Worlds." AMAZING STORIES has been made thinner—which implies the use of thinner paper, but absolutely no reduction in the number of pages. About eight months ago, we substituted a better paper, which reduced the thickness of the magazine some 10%.

Recently, through a mistake of the paper mill, a carload of paper that was not intended for this publication was sent to and used by our printer, which accounts for the fact that some of our readers received thin copies. You will find that the present issue is up to the standard again. —EDITOR.]

CONVERTING A CRITIC

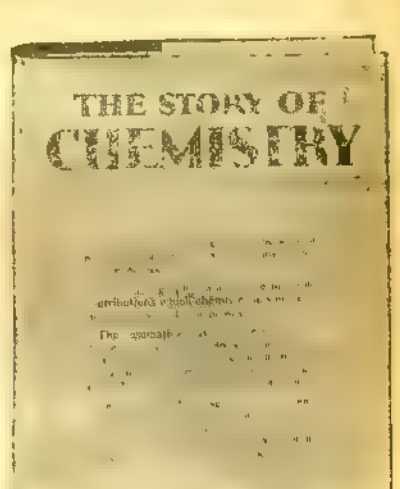
Editor, AMAZING STORIES:

The other day a very learned friend of mine came upon me reading the last issue of the AMAZING STORIES. He wanted to know why I read such "trash" and why I did not read something worth while.

My duty was plain. I first told him if such men as Edgar A. Poe and H. G. Wells wrote "trash" I had yet to know it. I then asked him if he would not like to live to see all the things the future will bring out. He said "yes." I then told him that is why I read such "trash;" you do not live the mere sum of 40 to 50 years but from 5,000 to 10,000 years. I am sure that almost no invention could surprise me now. It would seem very familiar to me. (I have gotten out of the rut). I gave him (my friend) an issue of AMAZING STORIES and sent him off. I was not surprised when he came to me today and wanted to know if I had any older issues. He was always "kidding" me, but then I had him. He was convinced. I have never missed an issue from the start in April, 1926 and I don't intend to.

Dr. J. L. Cobra.
Santa Cruz, Mex.

[We are glad you convinced your friend. We are basing our work on the idea that a highly intelligent and appreciative audience can be reached and we are sparing no effort to do so. Some like one story better than another, some will absolutely dislike some of the stories. All this is to be expected, and is unavoidable, but your account of converting your friend is certainly very graphic, and amusing, and we appreciate what you've done. —EDITOR.]



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ANOTHER VIEW OF H. G. WELLS

Editor, AMAZING STORIES:

As I is is my second letter to you, I will not consume space complimenting you on your publication. That it fills my hours of relaxation and stimulates my imagination to the *nth* degree, is sufficient.

The November issue of AMAZING STORIES was once again examined critically. One author in particular appears to be the target of censure. That is poor, abused Mr. Wells. Some of the self appointed critics do not have the common decency to adhere to the regulations of convention, in their fervor of derision, but resort to the vocabulary of the pugnacious illiterates, to express their vehemence. However, this is mental *vis inertiae* and can only be adjusted during the course of evolution. Regarding Mr. Wells' case, let us hope he successfully repels these incidental onslaughts and does not deviate to the level of his disparager's imaginations.

For the sake of argument, let us take a few of the points criticized. "The War of the Worlds" was the great bone of contention. In the first place length of description is a matter of opinion. Charles Dickens was a past master in the art of diffusive definitions. Still, his works are considered classics by the intelligentsia. If a reader demands his literature in abbreviated form there are books of this quality in every librarian's establishment. A lighter and more violent form of fiction should satiate this uncontrollable passion which looks for action in every line.

The request that his stories be eliminated is not only extremely egotistic, but ludicrous as well. Pardon my cynical attitude, but it's laughable to hear a person of little or no literary standing tearing a recognized genius, in his particular line, to shreds, with no fundamental data to base his criticism on. The countless others, who are entertained by the despised tales, are given no consideration. The ever-present sense of overindulged *ego* demands that the displeasing sections be abolished. Such a specimen has the consummate presumption to say, "Vanity, thy name is woman." I have always believed that egotism was the fundamental basis of existence, but I detest seeing the veneer of culture being so rudely thrust aside and the egotistic element so forcibly applied.

Don't labor under the impression that I am H. G. Wells' champion. He is one of my favorite authors, but my scope of literature has been wide and varied. His remarkable imagination, his phraseology and his technique in description are the underlying factors that bring me to his defence. I am well aware of the fact that it is unnecessary to defend him, but I derive a certain amount of pleasure during the procedure.

Another of your correspondents waxes philosophic and defines the "intrinsic impossibility." Philosophy and intrinsic do not combine. Intrinsic is defined as real, true and, in this particular case, is converted into the absolute, or absolute state of impossibility. Since philosophy fails to admit the absolute state of anything, the intrinsic impossibility must revert to the practical in a relative state. It thus becomes a minor truth influenced by the major or philosophic truth, which disproves the absolute and renders the practical impossibility unstable. A practical impossibility may exist in a relative sense, but an intrinsic or absolute philosophic state of impossibility, never. I have been a follower of Herbert Spencer for years and sincerely trust I have done his teachings credit.

Many thanks again for the enjoyable hours of reading you give me, and my best wishes for the perpetuation of your success.

C. P. Prescott,
542 Bergenline Avenue,
West New York, N. J.

[We are glad to see some of our correspondents come to the defence of Mr. Wells, although it would seem that so popular a writer, one of the most read of the present day, needs no defender. The idea of eliminating his stories, we find, is very promptly condemned by this writer. He is a favorite author of not only our correspondent, but of an enormous clientele. So here we have the "War of the Worlds" commented on and criticized by a follower of Herbert Spencer, and we are glad to find the subject so well treated.—EDITOR]

A "PRO-WELLSIAN"

Editor, AMAZING STORIES:

Your excellent magazine is the first, last, and only one to which I have written, but as I could not let a few outrages, such as calling Mr. Wells "rotten," go by without challenging them, so here I am.

First let us take Mr. Wells. The main "anti-Wellsian" in the November issue, is your Flag staff correspondent. Firstly, in the "War of the Worlds" his scorned "exodus of the people" is *literature!* What more living or graphic picture of an utterly demoralized and panic-stricken nation, entirely overwhelmed by fear of the unknown, could you even want? No wonder the gunners couldn't keep their targets; they were practically self-hypnotized with their awe and horror, and what is more, I do not believe Americans could have done any better. Incidentally I should like to bring to the attention of Mr. S. Kaufman, another fault-finder, that an airplane, outlined against the sky, is much more easily seen and brought down by such a weapon as the heat-ray than by entrenched artillery. As to the spheres, Mr. Wells *did*, most specifically, mention that they were immediately

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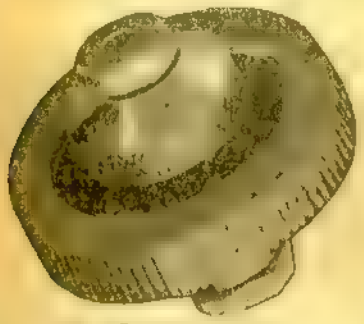

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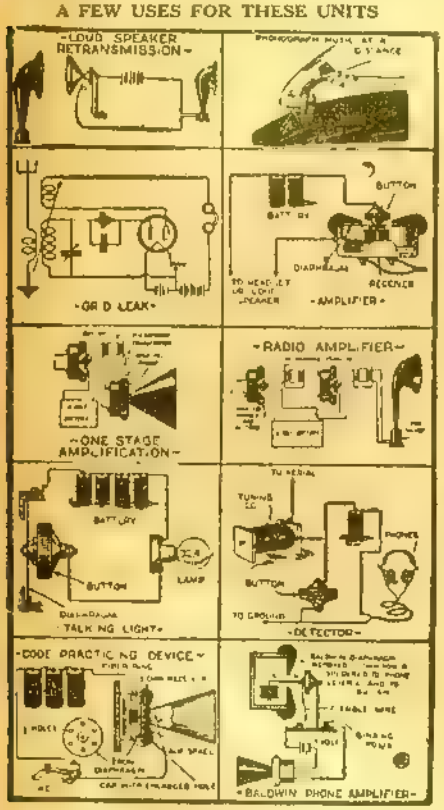

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guarded by Martians as soon as they landed. Mr. Riordan cannot have read his AMAZING STORIES very carefully.

Well, so much for H. G. Wells, although much more can be said for him. Probably every one doesn't like him. Our tastes are not all alike, but we can at least give others credit for having some taste. As to your other authors Mr. Merritt is, so far, my firm favorite. He is *great!* The way he can make words live is a marvel. This is the quality that made Poe, and I notice that Serviss, Verrill, Verne, Wells, and, to a certain extent, Burroughs, all have it. The latter is a good writer, and he certainly has a good imagination, but there is a good deal of sameness to some of his books. Ralph Milne Farley, who had three stories of Venus, "The Radio Man," "The Radio Beasts," and "The Radio Planet," in one of the Munsey publications, has better science. In the last for instance, the earth-born hero is forced to construct a radio apparatus entirely from the material that is found in nature. There is also a race, or rather several races, of intelligent insects which contest the supremacy of the more human inhabitants. I should surely like to see these in AMAZING STORIES as well as some of Conan Doyle's scientific stories. His latest "Marascot Deep," is now running in the "Saturday Evening Post"

As to SCIENCE AND INVENTION re-prints, by all means have them. But start from the beginning. We are not all old readers, especially we younger enthusiasts. Ray Cummings has done good work in the past, and many of us would like to know how Dr. Hackensaw started. I, for one, had read some six stories about him when they suddenly stopped. Let's have him from "Secret No. 1" clean through to "Secret No. last"

Monthly or semi-monthly? I really do not care, although I have a leaning in favor of the monthly But please don't change until the beginning of a new volume; otherwise it would wreck the index that I am compiling. As for the *Annual*, you might make it both annual *and* semi annual. For instance, a long novel once a year, or perhaps two, and say one old and one new story by favorite authors twice a year. I think that it would work

There is a good deal left to say, but I won't usurp all the space granted to us readers, so I'll let it go for someone else to say. At any rate, "AMAZING STORIES *ueber alles.*"

Schuyler Miller,
302 So. Ten Broeck St.,
Scotia, N. Y.

[Although we do not feel that Mr. Wells needs any defense, because he is well able to take care of himself, we are glad to find our views of "The War of the Worlds" confirmed by numbers of our readers. Detail, if skillfully applied, as Mr. Wells undoubtedly applies it, adds greatly to the *vraisemblance* of a story. Dickens and Thackeray are good examples, and it is not too much to say that if we go back to the days of old times, even Homer in his epics uses detail with great effect. Wells' story of "The War of the Worlds" and his other stories, were the detail omitted, would lose immensely. We feel that Mr. Merritt, in "The Moon Pool" certainly produced a very striking piece of work, and to anybody who has been interested in the Irish Celts, his depiction of the character of the Irishman, the mixture of temperament, spirituality, and practical everyday mentality is quite skillful.—EDITOR.]

SUGGESTIONS FOR REPRINTS H. G. WELLS UPHELD

Editor, AMAZING STORIES:

I have read your Magazine, AMAZING STORIES, with considerable interest from about the fourth or fifth issue. I have always taken an interest in science and scientific fiction, and have greatly enjoyed many of the stories which have appeared in this magazine.

I think your policy of reprinting stories by Jules Verne, H. G. Wells etc., is a very good one, and it is very interesting to read them again after many years. In this connection, I would like to ask if you could reprint some of the stories by George Griffiths, of which "A Honeymoon in Space" is one of the best known. I think this story is out of print now, and I am sure that if it was reprinted as a serial in your magazine, it would be much appreciated. As far as I remember, the story was to some extent divided into episodes, one of which could appear each month. This author has written several very good yarns on scientific lines, though I cannot now remember the names, and I, for one, would very much like to read them again.

I would like, however, to join issue with you on the subject of reprinting stories which have *just* come out in book form. I bought a copy of "The Land That Time Forgot" shortly before it came out in your magazine, and as the instalments were long, and took up a considerable amount of space, I felt that I was being done out of a good deal of reading matter each month. Unless you can print a story *before* it comes out in book form, I am sure it is a mistake to put it in a magazine. Of course, this is quite a different matter from reprinting old stories by well known authors.

The above brings me naturally to commenting on the letters from A. M. Riordan and S. Kaufman which appear in your November issue. Neither of them appear to have grasped the fact that "The War of the Worlds" was written in 1898, i.e. practically thirty years ago, when weapons of war had not—by a *very* long way—reached their present

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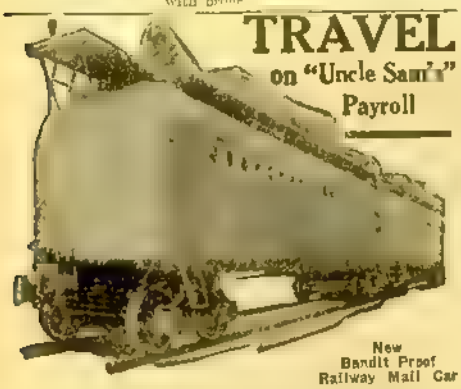

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power and accuracy. Even Mr. Riordan's American gun crew—using the weapons of thirty years ago—might not have found it too easy a job to tackle a Martian. As for the airplane which Mr. Kaufman pathetically asks for—I wonder if he would have liked to have been the pilot of the kind of machine that would have been produced five years before the Wright brothers made their first flight, quite apart from tackling a Martian with it. I don't think I should care for the job.

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[We are indebted to you for your suggestions about reprints. We find that there is a special interest in such, because much good work escapes only too many readers, who may not see the particular magazine in which it was given, and it is also very interesting to go back and pick out what we may term the "classic short stories" for our columns. At the same time, you must remember that we are restricted to stories involving some form or amount of science so that we have a restricted field to select from. Your comments on H. G. Wells, are very much to the point. —EDITOR]

A SUGGESTION FOR THE EARTH'S RECKONING OF TIME

Editor, AMAZING STORIES

I have just finished reading a very excellent and highly interesting discussion on the mysteries of time, supposed to be an accurate exposition of the astounding discoveries of that distinguished and eminently great scientist, Doctor Mentirose.

Far be it from me to criticise the work of so great and eminent a scientist as the learned Doctor. Yet, lest some of the great mass of the unscientific public, who will read of these discoveries, may misconstrue some of his statements and be led into the bypaths of unscientific speculation, I feel that it is my duty to expound on some of his statements and perhaps criticise some.

Far be it from me to offend the learned Doctor, but I feel that in some cases he has let his imagination take flight, and has not confined himself to hard facts and sound reasoning, and that some of his statements were actually unverified by experiments.

First, let me say that I heartily agree with the eminent Doctor and his illustrious contemporary, Einstein, that time like motion is purely a relative proposition, to which fact I would like to add that size and shape are also purely relative.

Likewise, I heartily agree that it is possible to look into the past and witness events which happened thousands or even millions of years ago. Likewise, I just as emphatically declare that it is absolutely impossible to look into the future provided that we do not juggle the time unit but confine ourselves to true time.

In farther presenting my reasons for these statements it will be necessary for me to divide my discussion into two parts, that pertaining to past events and that pertaining to future happenings.

A straight line is the shortest distance between two points and time may be said to be analogous to this straight line in that it is the shortest duration or space between two events called the conception and the perception. In other words, time may be said to be that which intervenes between a happening and its perception by the human mind or between any two or more happenings which did not take place at the same instant.

Now, in a strict sense of the word, an instant of time would be the same throughout the entire universe. An event happening in one part of the universe actually happens in the most diverse part of the universe at the same instant. Perhaps it may [illegible] what the [illegible] we [illegible] of perceiving an action unless we take into consideration radio, sound or electrical means but what would hold true for light would hold true for these also, so we will confine our illustrations to light rays only.

Light has a finite speed of approximately 186,000 miles a second, far, very far from instantaneous. Consequently an action taking place at a distant point would not be perceived by us at our point of observation until the light rays or vibrations set up by the action reached us.

If this action or happening was carried by media whose speed was instantaneous and we had instruments or senses to intercept it, any action happening any place in space would be perceived at any other point in space at the actual instant it happened instead of at a later time. Perhaps there are such media and we haven't instruments or faculties to intercept and register them on our senses. However, be that as it may, this peculiar discrepancy in the speed of light waves from the instantaneous makes it possible for us to look into the past. Now this perception might be accomplished by two methods. First, by intercepting light waves from the particular point of action at any desired point in space by means of ether waves or rays which would make them visible to our senses of sight, in which case the farther away from the point of action the rays are intercepted the farther into the past one would look, and secondly by actually traveling in space at a speed greater than that at which the light rays from the

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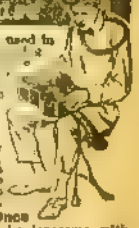

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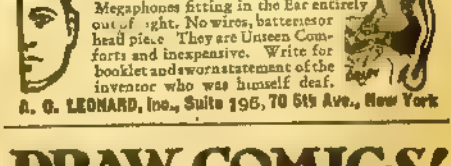

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ut of action were traveling. In which case the ther away from the point of action one traveled farther into the past one would penetrate. How- this viewing of past events must necessarily be y a pictorial perception as it is evidently im- sible for the physical present to mingle with the ysical past. That is, it would be impossible for a person living in the present to transmit his physical self into the past and live and act in the drama of life then being unfolded.

Now let us see what are our chances of penetrating into the future. Our good friend Doctor Mentiroso seems to believe this to be possible and cited several instances where he had actually witnessed an event several hours before it was reported as happening in the opposite side of the world although the word was sent almost immediately over the press wires and should have been at the most only a few minutes late in arriving.

Now here is where I must differ very radically from our learned Doctor, because from any angle which I can conceive of, I cannot imagine man ever invading the future and witnessing future events before they happen. Any witnessing of future events such as claimed by our learned Doctor would have to be done by a juggling of the time unit.

As we stated before, any action or object creates a disturbance in a certain media such as light and this affects our senses of sight causing us to perceive the action or object, the time intervening depending on the distance the light waves must travel. Consequently it is self-evident that unless we have the action or object to create the waves in the medium we could have no perception of it.

The mere fact that our learned Doctor was able to perceive an event apparently twelve hours before it happened was due to the rather crude method which man has invented for telling the duration of time on this planet. He has adopted an arbitrary system based upon the sun's position but unfortunately the sun does not rise at the same period of time at all points on the earth, there being a difference of twelve hours from one point to a directly opposite point. In other words the sun rises twelve hours later at a point directly opposite New York than it does at New York, yet in reality it is the same instant of time every place on earth. To make up for this descrepancy man has conveniently set his time pieces back to correspond to sun-time. Thus a person traveling instantaneously around the earth from east to west and setting his watch to correspond to the prevailing time at any specified points would find on returning that he had lost a day and night, or in other words, his watch would be twenty-four hours slow.

Now that is the condition our friend Dr. Mentiroso found and he set his watch according to the prevailing time in the places he visited. Consequently he arrived in his starting place according to his watch several hours before he started. Looking at it from this angle a news item may be published before it happened, due to the difference in time between the two points and to the rapid means of communication, while in the true sense of the word the event happened at just one instant of time and as such was registered in all parts of the universe at that instant.

Now such a condition as above stated should not exist in this enlightened age of rapid communication. It seems to me that the same instant of time should be specified the same throughout the entire universe and that sun time should be made to correspond. Twelve noon should be twelve noon at every point even though the sun was on the opposite side of the earth at the time. Perhaps future generations may make this correction and do away with the possibility of a news item arriving in one part of the world before it was supposed to have happened.

I hope now that I have succeeded in exposing the fallacy of the theories of Doctor Mentiroso of penetrating into the future in the true sense of the word. Let us always bear in mind in expounding any other theories of future forecasting, that it is always necessary to have the action or object before our senses or any medium for registering it will perceive or carry it. Thus it is self evident that any future forecasts are an impossibility and can exist only in the imagination of clairvoyants and fiction writers.

B. Allen Frazier,
517 S. Fort St.
Springfield, Mo.

[We have received a good deal of unfavorable criticism of Dr. Mentiroso. Comparatively few people, however, realize the surpassing importance of the difference of time at different latitudes which has taken countless ships in safety over the oceans of the world, and here, curiously enough, we find that Dr. Mentiroso's theories have elicited an extremely interesting letter with the original suggestion about changing the nomenclature of time. We see our worthy friend, the "Lying Phenomenon," has given good service in eliciting this suggestion from you. It seems to us, however, that the doctor's critics have taken him far too seriously, and should rather regard the humor of the whole thing, than its correspondence with their own ideas.—EDITOR.]

MIXED CENSURE AND PRAISE

Editor, AMAZING STORIES:

Because this is my first letter to you, do not think that I am an "old crab." I have found several things the matter with your stories that you have published. In your October issue "Around the Universe" by Ray Cummings was terrible! In the first place he tried to have too much happen in one story and took no time for explanations,

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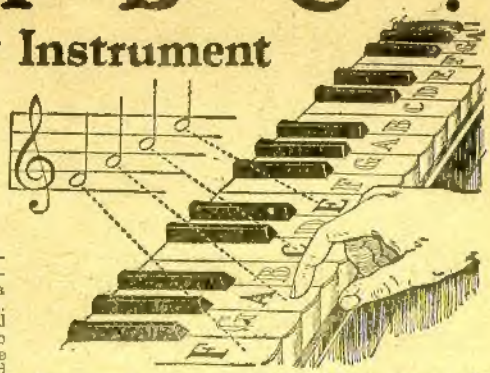

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especially when the Professor took the planets from their orbits. If the story was carried into detail and made longer so as to become a serial, it would be much better. All of Cummings' stories are not bad ones, however. For instance, in the "Weird Tales" they published a serial "Explorers into Infinity" by him which was wonderful. If you are going to reprint some of his stories why not pick the good ones? Another thing is H. G. Wells. He is the worst writer that you have. He always tries to paint the character too much, and as it is, he only spoils a good story. His story, "The War of the Worlds," started all right, but its ending was terrible. Why? Because he makes the brother's chronicle too long. He takes a little plot that would ordinarily cover only a paragraph or two and makes it take up a couple of chapters. There are only two more criticisms that I have, and these are: Why print those beastly detective and humorous stories? They have no right to be in your magazine. They contain only a little scientifiction, and that is superfluous.

Now, let's turn to something toward the good of your magazine. Your authors, as a whole, are very good. Among the best are: A. Merritt, Edgar Rice Burroughs, A. Hyatt Verrill, Garrett P. Serviss, and your latest, Garret Smith. These authors all are very good. But A. Merritt certainly leads them all. I am looking forward to the sequel to "The Face in the Abyss" with great interest. Why not have him write a sequel to "The Moon Pool," which was a real masterpiece? I am sure the readers would accept this with gratitude.

I am greatly in favor of having a semi-monthly magazine. It seems too long to wait a whole month for the next issue to appear.

Lawrence Clark,
Hotel Norris,
Brockton, Mass.

P. S.—I have just bought your November issue, and "The Machine Man of Ardathia" was a "corker."

[It is fair to say that in selecting stories, the Editor is somewhat influenced by the reputation of the author, and we feel that our list of names is quite impressive. Ray Cummings' work is very much appreciated, and you will find in our columns, appreciation of detective stories. You will observe that detective stories give an admirable basis for science, especially physico-psychological apparatus and phenomena. We hope that our authors may be inspired to carry out the sequels to their stories as proposed by many of our readers. Most of our readers liked "The Moon Pool," even if it was not as scientific a theme, as some others have been.—EDITOR.]

SUGGESTIONS FROM A PRINTER

Editor, AMAZING STORIES:

The introduction of Mr. Verrill's story in the November issue prompts me to write you and give my opinion of your magazine, with suggestions, which I think will be met favorably by your readers, as well as by your authors.

Since, according to Mr. Verrill, no two seem to agree with comments as to stories, etc., perhaps many will agree about the appearance of your publication. You can glean from the heading of my letter that I am a printer, while not a large commercial man nor one of vast experience in the game, I have some ideas about the dress of printed matter.

I offer these suggestions, and trust that no offense will be taken at the criticisms, nor will they be misunderstood.

In the first place, looking at the magazine from the inside out, I find there are not many publications which contain the material, both from the standpoint of conversational English, and from that of ideas, which I find in your AMAZING STORIES. I can hardly call it literature, which I would like to do, but it resembles it very much. The authors have very good imaginations, and have material which contains food for thought even for would-be scientists, in which group I would be classed.

As I said looking at the book from the inside out it has merit which does not reflect from the outside in. If you could and would get away from those heavy lithographed covers, and use half-tones (with a slight change in the style of the drawings), it would have more appeal to the public. I mean to more of the public. Then too if you would use a white book paper instead of the heavy newsprint you now use, and command more advertisements to off-set the added expense, it would create a larger circulation, and then you would get a better class of advertisers and incidentally form a more or less endless chain between advertisers and circulation.

It can be done, and I hope it will be done, for I'm very much interested in the success of the magazine, and want it to continue. I hope within the next four months to submit a story similar to Garret Smith's "Treasures of Tantalus," and yet it is different enough not to have the aspect of being copied or of being a take off.

A few more illustrations (in the new magazine suggested) would be beneficial providing that you can find other artists who can blend in with Paul, for that type of sketches.

I have been wondering why some enterprising fellow doesn't locate an author in or near Berlin or Vienna, and obtain some authentic fiction about the present trend of science. Take for instance the recent movie "Metropolis," a German Production (Universal Film Co., supervision) the most wonderful production I have ever witnessed. The authors

-to the Red Planet —Mars

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the play could give many interesting articles, stories, both authentic and imaginary, for they nearer the home of sciences of various natures, we are here in America. I mean they can other subjects than just light rays, death and other rays, and fourth dimensions.

the play I have reference to, trusting that you not seen it, deals with a topic, and ideas similar to these used for "The Day After Tomorrow" by Sir Phillip Gibbs, in the Cosmopolitan. In other words "Metropolis" is the city of the future, emphasizing the future living conditions, buildings, and the drudgery of future work. Fantastic, that's true, but quite probable, and possible, and not as remote as some of the articles in your magazine.

Watkin L .Evans,
4010-48th Avenue South,
Seattle, Wash.

[We think that you can safely call the stories we publish literature. We certainly have distinguished present-day authors. Your interest in the success of our magazine, we assure you is most warmly appreciated, and we should be very glad to read any stories which you might submit. Our artist, Paul, has a particular talent, which finds a very good field in the class of stories we print. We have published in the past, stories dealing with the city of the future, some descriptions of which have been by no means lacking in originality and picturesqueness."

We fully agree with you that our covers are perhaps not artistic. We are fully aware of that point, but we are far more interested for selfish reasons and from your standpoint as well, that for the success of AMAZING STORIES, the magazine must first of all sell. It has been known, by experience, that only loud covers will stop the passerby at the news-stand these days. All so-called artistic covers, with few exceptions, unless they are pretty girls' heads, do not make for large circulation.

As to the inside paper—It is true that the paper which we are using is not of the best, but it would be economically impossible to publish this magazine at all, right now, with a better paper used. As soon as the publication gets further along on its advertising road, it will be possible to use much better paper.—EDITOR.]

A WELL THOUGHT OUT SUGGESTION FOR A STORY, WHICH WILL BE AMAZING, YET TRUE

Editor, AMAZING STORIES:

Being an ardent reader of AMAZING STORIES and one who haunts the news stands for each new copy on the fourth of every month, I think I am entitled to my little say in regard to its contents.

Although each copy is priceless to me and brings me great pleasure I find myself stumped when I try to interest my friends in its contents. Some think me crazy, some just smile in a pitying way, and others would like to be more convinced. Now, all of your stories are very good. I gather much valuable information from them all, and your stories in general tend to satisfy a craving I have had all my life for what lies beyond our own world, but I am not only interested in myself, I would like to interest my friends, and I want you to help me.

All your stories "with the exception of a few," start with the present and wind up in the future. I have read every issue that has been released and there isn't one story that does not make the reader stretch his or her imagination to some extent. Some stories seem almost impossible even to your imagination, while others make your brains reel trying to keep up with them.

Now, here is what I would like you to do. Suppose AMAZING STORIES were being published in the fourteenth century; the authors of stories written at that time would naturally be persons with great foresight, and gifted with ideas that might come true hundreds of years later. They would probably dream of great machines flying in the air, people talking thousands of miles through the air, etc. and bring in many of our present day wonders, which would all be very amazing to the people of the fourteenth century, just as are our present day amazing stories of today to us. The people of that day would never believe some of our present day facts, nor will a lot of present day people believe in what will be facts of the future.

I want you to get someone to write such a sample story that will show your present readers that AMAZING STORIES can come true, and the only way to convince them is to presumably write it in the fourteenth century and show everyone that what would appear a mad dream hundreds of years ago is just a commonplace today. I am sure such a story would convince the majority of my friends of what might happen in the future. It would prove of great interest to your thousands of readers.

We today could feel how superior we are in intelligence to the people of that day, and how ignorant we may appear to the coming generations.

At least ask your readers what they think of this idea.

Hoping you can do this, and will publish this letter.

Arthur Ostrander,
293 Marion Street,
Brooklyn, N. Y.

[Your suggestion for a story is so good, that we hope some of our authors will act upon it. It would be quite in the vein of one of Edgar A. Poe's stories and should offer a fertile field. What do our readers think?—EDITOR.]

OPPORTUNITY AD-LETS

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